FD-1057 (Rev. 5-8-10)

UNCLASSIFIED//~~FOUO~~

FEDERAL BUREAU OF INVESTIGATION

Electronic Communication

Title: (U) Funds raised and investor information on CardioDx **Date:** 12/01/2015

CC:

From: SAN FRANCISCO
SF-I4
Contact:

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b7C
b7E

Approved By: SSA

Drafted By:

Case ID #: 209A-SF-6690395 (U) Cardiodx, Inc;
Qui Tam;
Medicare Fraud

Synopsis: (U//~~FOUO~~) Funds raised, investor information and SEC filings on CardioDx spanning five years, from 2010 to present

Full Investigation Initiated: 09/25/2015

Enclosure(s): Enclosed are the following items:
1. (U) SEC Filing - Form RW 2014
2. (U) SEC Filing - From D 2011
3. (U) SEC Filing - Form S-1A 2014
4. (U) SEC Filing - Form D 2010
5. (U) SEC Filing - Form D 2015
6. (U) SEC Filing 2006
7. (U) SEC Filing - Form DRS 2013
8. (U) SEC Filing - Form D 2014
9. (U) SEC Filing - Form D 2012
10. (U) SEC Filing - Form DRS 2013
11. (U) SEC Filing 2004
12. (U) SEC Filing 2013
13. (U) SEC Filing DRS-A 2013

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14. (U) SEC Filing - Form S-1 2013
15. (U) SEC Filing - 10-2008
16. (U) SEC Filing - Form S-1A 2013
17. (U) SEC Filing - Form S-1A 11-2013
18. (U) SEC Filing - Form 8-A128 2013
19. (U) SEC Filing - Form S-1A 11-2013

Details:

(U) Per SA [redacted] request, open source searches were conducted on funds raised for CardioDx including investor information and biographies of the investors for the past five years. SEC filings were also obtained documenting the amount of money CardioDx has received.

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Funding Rounds

(U) On 21 July 2006, $19 million was raised for CardioDx by the following investors: Mohr Davidow Ventures, Texas Pacific Group (TPG), Kleiner Perkins Caufield & Byers (KPCB).

(U) CardioDx raised $40 million in a round of equity based financing during March 2010. The following investors supported the Series E investment: new investor, Longitude Capital, KPCB, TPG Biotech, MDV, Intel Capital, Pappas Ventures, DAG Ventures, Asset Management Group, and GE Capital.

(U) On 17 May 2010 CardioDx raised $34.5 million. The following investors supported the Series D investment: KPCB, Intel Capital, Mohr Davidow Ventures, Asset Management Ventures, DAG Ventures, GE Ventures, Pappas Ventures, and TPG Growth.

(U) CardioxDx raised $60 million in financing on 11 May 2011. The following investors participated in this round of investment: new investors Longitude Capital, J.P. Morgan, Acadia Woods Partners, Artiman Ventures, and Bright Capital, as well as existing supporters KPCB, Mohr Davidow Ventures, TPG Biotech, Intel Capital Pappas Ventures, Asset Management Group and GE Capital. The funds are

anticipated to be used to expand reimbursement coverage in the United States in blood-based gene expression testing for obstructive coronary artery disease as well as continue to develop new products in the field of cardiovascular genetic diagnostics.

(U) CardioDx raised $30.51 million on 1 July 2012. The following investors participated in this round of investment: Acadia Woods Partners, Artiman Ventures, Asset Management Ventures, Bright Capital, Duff, ACkerman and Goodrich, GE Capital, Intel Capital, J.P. Morgan Securities, Inc., KPCB, Longitude Capital, Mohr Davidow Ventures, Pappas Ventures, Temasek Holdings, TPG Growth.

(U) CardioDx raised $58 million as reported on 27 August 2012. The following investors participated in the equity financing: Acadia Woods Partners, Artiman Ventures, Asset Management Ventures, Bright Capital, DAG Ventures, GE Capital, Intel Capital, JP Morgan Chase & Co., KPCB, Longitude Capital, Mohr Davidow Ventures. The funds are anticipated to be used to fund the commercial expansion of Corus CAD and to develop additional genomic diagnostics in the field of cardiovascular disease.

(U) On reported date of 1 October 2012, CardioDx raised $6 million in private equity funds. The following investors supported this round of investment: Pappas Ventures, Longitude Capital, KPCB, and Asset Management Ventures.

(U) On reported date of 24 July 2014, CardioDx raised $20.98 million in private equity funds. Asset Management Ventures supported the investment.

(U) On reported date of 18 December 2014, CardioDx raised $35 million in Series DD financing. Alberta Investment Management (AIMCo) was the sole supporter of this investment. The funds will permit CardioDx to broaden the commercial use of Corus CAD, which is the sole clinically validated blood test that uses age, sex, and gene expression to measure the likelihood of obstructive coronary artery disease in symptomatic

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patients. The funds will also augment the company's research efforts to improve healthcare quality and efficiency through the development of additional genomic tests for coronary artery disease.

(U) [redacted] made the following statement regarding AIMCo's support during the investment round in December 2014, "we are pleased to welcome AimCo to the CardioDx family. AIMCo's support further validates our mission, and we are grateful for the continued commitment of our current investors, who recognize our expertise in developing genomic tests to address important unmet clinical needs for coronary artery disease."

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(U) CardioDx raised another $5 million on 3 July 2015 in Series D investment. Investor information wasn't disclosed.

Investors

(U) The following investors have invested in and supported CardioDx:

- Acadia Woods Partners
- Alberta Investment Management (AIMCo)
- Artiman Ventures
- Asset Management Investors (AMW)
- Bright Capital
- Duff, Ackerman, and Goodrich
- DAG Ventures
- GE Capital
- GE Ventures
- Intel Capital
- JPMorgan Chase & Co
- JPMorgan Partners (JPMP)
- JPMorgan Securities Inc
- Kleiner, Perkins Caufield & Byers (KPCB)
- Longitude Capital
- Mohr Davidow Ventures
- Pappas Ventures
- Temasek Holdings
- Texas Pacific Group (TPG)

- TPG Biotech
- TPG Growth

Acadia Woods Partners (ACP)

(U) Acadia Woods Partners (ACP) is a venture investment partnership based in New York that primarily focuses on early stage technology companies, media, and life science companies. ACP has invested in the following companies: ScrollMotion, DataMi, House Party, IntegriCo Composites, and CityMaps. In May 2011, ACP invested $60 million in CardioDx

Alberta Investment Management (AIMCo)

(U) Alberta Investment Management (AIMCo) is based in Canada and is a high performing investment manager that finds the best opportunities from around the world and delivers results. AIMCo has more than $75 billion of assets under management. AIMCo invests in both public and private market investments. Public market investments account for more than three-quarters of AIMCo's assets under management which specializes in public equity, money market and fixed income, mortgages and private debt and loans. AIMCo also invests in private equity, infrastructure and timberlands.

Artiman Ventures

(U) Artiman Ventures (Artiman) is an early-stage Silicon Valley-based venture that are active partners in the creation and development of white space companies. They have a history of working with entrepreneurs for the long term, shaping the concept, defining the market, planning the strategy and managing its execution and implementation. Artiman has raised $1.03 billion in funds.

(U) Artiman Ventures has invested in the following companies:

- Zyme
- zSpace
- Yantra

- Xambala
- Vidcie
- Prysm
- Pricelock

Asset Management Investors (AMV)

(U) Asset Management Investors (AMV) primarily invests in companies that push innovation to new levels. AMV has continued its diversified approach to venture capital investing by deploying capital in information technology and health care markets. AMV invests in a combination of technology and biotech, but also targets the innovative new space or digital health in order to leverage their expertise in both sectors.

Bright Capital

(U) Bright Capital is an independent venture capital firm that invests globally in a wide range of promising companies solving problems in a variety of clean technology, industrial bio, telecom/electronics and IT markets. Bright Capital is an active venture investors connected to the industry and focused on innovation leading to tomorrow's category leaders. Bright Capital invests across multiple stages from seed and start up investments to growth capital.

Duff, Ackerman and Goodrich (DAG)

(U) Duff, Ackerman & Goodrich (DAG) is a private investment firm that manages investment funds in excess of $1 billion and provides equity capital for management buyouts, acquisition platforms, and ventures. DAG focuses on delivering consistently superior returns for its partners by building companies in select industries such as specialty manufacturing, communications, media and information technology. Their approach has led to investments in manufacturing, radio broadcasting, cable TV, and wireless services.

(U) Communications & Media investing

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- SagmoreHill Broadcasting
- Peak Broadcasting
- Horizon Tower

(U) Specialized Manufacturing investing

- Motorsport Aftermarket Group

U) Emerging companies investments

- Entrisphere - builds broadband access systems for telecommunication services
- Topspin communications
- Trapeze networks
- Kovio
- Qlusters
- Tropos networks

DAG Ventures

(U) DAG Ventures was spun-off in 2004 from Duff, Ackerman & Goodrich, a private equity investment firm focused on investments in communications and media industries. DAG Ventures leads mid-stage and growth financing rounds into promising portfolio of select, proven early-stage VC partnerships. DAG Ventures manages $1.8 billion across over 160 companies in a wide array of technology sectors.

GE Capital

(U) GE Capital is an extension of GE's rich heritage of building and supporting growth. Investing in sectors they know best, GE Capital is able to provide more than just financing. GE Capital brings insight, knowledge and expertise to every loan. Around the world, GE Capital is helping their customers to invent more, make more, sell more and do so with great efficiency.

GE Ventures

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(U) GE Ventures partners and invests in the best ideas within software, healthcare, energy, and advanced manufacturing.

(U) GE Ventures focuses on the following:

- Healthcare – digital health, healthcare, IT/Services, minimally invasive procedures, precision medicine
- Advanced manufacturing – integrated design, advanced fabrication, brilliant factory, robotics, digitized supply/chain
- Software – cyber security, cloud and infrastructure, industrial data, user experience
- Energy – utility 2.0 smart buildings and smart cities, oil & gas/commercial models
- Corporate – selectively invests in start-ups that are focused on improving corporate productivity and operational efficiencies

Intel Capital

(U) Intel Capital has invested more than US $11.6 million in over 1,447 companies in fifty seven countries. During that time frame, over 213 portfolio companies have gone public on various exchanges around the world and more than 373 were acquired or participated in a merge. Intel Capital focuses on building technology ecosystems. Intel Capital invests in developers and providers of hardware, software, and services in the following sectors:

- datacenter-cloud
- digital media
- internet of things
- manufacturing & labs
- ultrabook
- security service-open source
- smart phones - tabletss
- wearables

JPMorgan Chase & CO

(U) JPMorgan is a leader in investment banking, financial services for consumers and for small businesses, commercial banking, financial

transaction processing and asset management.

JPMorgan Partners

(U) JPMorgan Partners (JPMP) is no longer investing. JPMP operated previously as a subsidiary of JPMorgan Asset Management Holdings, Inc. JPMP specialized in investing, financing and limited partnership investing. Investment activities are structured according to industry interest, including consumer, retail, services, financial services, industrial growth, life sciences and health, technology, media and telecommunications. Preferred prior investments ranged between $25 million to $200 million.

JPMorgan Securities, Inc

(U) JPMorgan Securities, Inc is a global industry leader with more than $13.7 trillion in assets under custody and $5.1 trillion in assets under administration. They provide innovative custody, fund accounting and administration and securities services to the world's largest institutional investors, alternative asset managers and debit equity issuers. Scale and capabilities are leveraged in more than 90 markets to help clients optimize efficiency, mitigate risks and enhance revenue through a broad range of investor services, securities clearance, collateral management and alternative investment services. JPMorgan is a leader in asset management, investment banking, private banking, treasuring and securities services, and commercial banking.

Kleiner, Perkins, Caufield & Byers (KPCB)

(U) Kleiner, Perkins, Caufield & Byers (KPCB) provides decades of experience to help develop businesses, recruit talent, forge strategic partnerships, design products and services, and bring ideas to the market. KPCB's tech, product and design councils bring together influential leaders across the tech industry to benefit various organizations.

(U) KPCB invests in the following companies:

- Square
- MyFitnessPal
- LendingClub
- Flexus Biosciences
- Twitter
- Nest
- Teladoc
- JD.com
- Foundation Medicine
- Dropcam
- Waze
- Google
- Amazon.com
- OPower
- Mandiant
- Luxvue
- Tesaro
- Atar Bio
- Fortify, an HP company
- Oculeve

Longitude Capital

(U) Longitude Capital (Longitude) is a private investment firm that focuses on venture growth investments in drug development and medical technology. The firm builds balanced portfolios from mid-stage to commercial-stage companies. Besides traditional venture capital investments, Longitude also looks for "special situations" in both privately-held and publicly-traded companies, such as spin-outs, recapitalization, PIPEs, royalties and structured transactions.

(U) Longitude operates in Menlo Park, CA and Greenwich, CT. As of 2013, Longitude has over $700 million in assets under management and recently raised $385 million for its second fund, Longitude Venture Partners II, LP in 2012.

(U) Longitude invests in and collaborates with companies at all stages of development, from privately-held seed stage to publicly-traded later stage life sciences companies, with a preference towards earlier-stage

medical device companies and more mature biotechnology companies.

Mohr Davidow Ventures (MDV)

(U) Morh Davidow Ventures (MDV) works best with entrepreneurs who welcome their commitment and involvement as well as their funding, those whose vision and sense of mission is both compelling and pragmatic. MDV values entrepreneurs who identify impressive market opportunities and are not afraid to go after them.

(U) MDV is usually the first institutional investor, but also makes seed stage investments. Examples of seed investments that raised additional rounds of venture funding with MDV include Proofpoint, PunchTab and Rocket Fuel.

(U) MDV Companies:

- Adamas
- AirPR
- Analyte Health
- Ryaka
- Audience Science
- Balance Therapeutics
- Band Page
- Brickstream
- Build Direct
- Cardiodx

Pappas Ventures

(U) Pappas Ventures (Pappas) is focused exclusively on investing in the life sciences sector across North America. They have a unique and comprehensive understanding of the uncertain pathway that life sciences companies must travel in their pursuit of success. Pappas' in-depth knowledge of the drug development process enables their management teams to provide insightful guidance and craft effective clinical and regulatory strategies. Pappas invests in a range of companies, from

preclinical companies that are within a year of initiating human clinical trial to companies ready to initiate Phase 3 studies.

(U) Pappas has been invested in the life sciences for 20 years, has raised 4 venture capital funds, has $435 million in capital under management, and has co-invested in over 100 investment firms.

(U) Pappas has invested in the following companies:

- Achillion
- Aclara
- Afferent
- Anther
- Areana
- Argomed
- Athersys
- Balance Therapeutics
- Barosense
- Bayhill Therapeutics
- Biosyntech
- BCI
- Calyx
- CardioDx

Temasek Holdings

(U) Temasek Holdings (Temasek) is an investment company based in Singapore. Investment themes focus on the following: transforming economies, growing middle income populations, deepening comparative advantages, and emerging champions. Temasek covers a broad spectrum of industries: financial services, telecommunications, media and technology, transportation and industrial, life sciences, consumer and real estate, and energy and resources.

(U) Major investments include the following:

- The Real Life Company

- Bank of China
- China Construction Bank
- China Pacific Insurance
- DBS Group
- ICBC - Industrial and Commercial Bank of China Limited
- Lloyds Banking Group
- Ping, an Insurance Company of China, ltd
- Prudential
- Danamon, PT Bank Danamon Indonesia
- Standard Chartered PLC

Texas Pacific Group (TPG)

(U) TPG is a leading global investment firm with $74.3 billion in capital under management. They are problem solvers, partners, and pioneers. Investments range from financial services, travel and entertainment, technology, industrials, retail, consumer products, media and communications and healthcare including capital, growth, biotech, and art.

TPG Biotech

(U) TPG Biotech is the life science venture investment arm of TPG (formerly known as Texas Pacific Group), a global private investment firm. TPG Biotech consists of a team of investors excited by the challenge of translating discovering and insights in the biomedical sciences into tangible products. TPG Biotech invests with scientific founders and business entrepreneurs to create novel companies and drive the growth of their existing portfolio.

(U) Since 2002, TPG Biotech has invested $1 billion in over fifty life science businesses. TPG Biotech supports entrepreneurs and scientists who are building innovation-based businesses in life sciences. Investments can be technology platforms as well as asset-based companies.

(U) TPG Biotech has started companies such as Veracyte, Virobay, and

Karos Pharmaceuticals from scratch and led investments in new ventures such as Ultragenyx Pharmaceutical, Auxogyn, and Trevi Therapeutics. TPG Biotech has continued to support companies such as Roka Bioscience and Rapid Micro Biosystems through commercialization and Genomic Health through product growth. They have invested in a diverse set of therapeutic areas and modalities including ophthalmology (Aerie Pharmaceuticals), drug-deveice combinations (Elevation Pharmaceuticals), antibodies (Macrogenics and Alder Biopharmaceuticals) and drug delivery for otology (Otonomy).

TPG Growth

(U) TPG Growth is a middle market and growth equity investment platform of TPG with more than $7 million in assets under management. TPG Growth targets investments in a broad range of industries and geographies while focusingg on the U.S. and large/emerging markets such as China, India, Brazil, Turkey, Africa and Southeast Asia. TPG's past and current investments represent a mix of disruptive and innovative companies across tech, retail and entertainment including Uber, Airbnb, Box, Domo, BeautyCounter, Ride, Angie's Artisan Treats, Fender, SurveyMoneky, Evolution Median and STX Entertainment.

(U) Portfolio investments include the following:

- Retail/consumer
- Pharma/medical products
- Business services
- Financial services
- Telecommunications
- Indus trials and manufacturing
- Healthcare services - CardioDx
- Technology services
- Software
- Transportation
- Leisure, travel, and hospitality
- Energy, power, and commodities

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- Technology hardware
- Cleantech renewable
- Internet
- Media and entertainment
- Real estate
- Semiconductors

(U) Attached to and made apart of this communication are SEC filings for CardioDx.

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RW 1 a13-15089_14rw.htm RW

CARDIODX, INC.
600 Saginaw Drive
Redwood City, CA 94063
(650) 475-2788

December 23, 2014

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549
Attn: John Reynolds
Tiffany Piland
David Link
Myra Moosariparambil
Craig Arakawa

Re: CardioDx, Inc.
Withdrawal of (i) Registration Statement on Form S-1 (File No. 333-191698) and (ii) Registration Statement on Form 8-A (File No. 001-36194)

Ladies and Gentlemen:

Pursuant to Rule 477 promulgated under the Securities Act of 1933, as amended (the "***Securities Act***"), CardioDx, Inc. (the "***Registrant***") hereby requests that the Securities and Exchange Commission (the "***Commission***") consent to the withdrawal, effective as of the date hereof or at the earliest practicable date hereafter, of the Registrant's Registration Statement on Form S-1 (File No. 333-191698), together with all exhibits and amendments thereto (collectively, the "***Registration Statement***"). The Registration Statement was confidentially submitted to the Commission on July 24, 2013 and originally filed with the Commission on October 11, 2013.

The Registrant has determined not to pursue the initial public offering to which the Registration Statement relates at this time. The initial public offering would have been a discretionary financing for the Registrant. The terms currently obtainable in the public marketplace are not sufficiently attractive to the Registrant to warrant proceeding with the public offering.

The Registrant confirms that no securities have been sold pursuant to the Registration Statement. Pursuant to Rule 477(c), the Registrant advises the Commission that it may, upon consideration of its financing and strategic options, undertake one or more subsequent private offerings in reliance on Rule 155(c) promulgated under the Securities Act.

The Registrant requests that, in accordance with Rule 457(p) under the Securities Act, all fees paid to the Commission in connection with the filing of the Registration Statement be credited for future use. In addition, the Registrant requests that the Commission consent to the withdrawal of the Registrant's registration statement on Form 8-A (File No. 001-36194), filed with the Commission on November 12, 2013 (the "***Form 8-A***"), with such request to be approved effective as of the date hereof or at the earliest practicable date hereafter.

Please send copies of the written order granting withdrawal of the Registration Statement and the Form 8-A to the undersigned at CardioDx, Inc., 600 Saginaw Drive, Redwood City, CA 94063, with a copy to the Company's counsel, Cooley LLP, Attn: Mark B. Weeks, Five Palo Alto Square, 3000 El Camino Real, Palo Alto, CA 94306-2155, facsimile number (650) 618-2034.

If you have any questions with respect to this matter, please contact Mark B. Weeks of Cooley LLP at (650) 843-5011.

Very truly yours,

CARDIODX, INC.

/s/ David L. Levison
David L. Levison
President and Chief Executive Officer

cc: Mark B. Weeks, Cooley LLP
David G. Peinsipp, Cooley LLP

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM D

Notice of Exempt Offering of Securities

OMB APPROVAL	
OMB Number:	3235-0076
Estimated average burden hours per response:	4.00

1. Issuer's Identity

CIK (Filer ID Number)

0001304909

Previous Names [X] None

Name of Issuer

CARDIODX INC

Jurisdiction of Incorporation/Organization

DELAWARE

Year of Incorporation/Organization

[X] Over Five Years Ago
[ ] Within Last Five Years (Specify Year)
[ ] Yet to Be Formed

Entity Type

[X] Corporation
[ ] Limited Partnership
[ ] Limited Liability Company
[ ] General Partnership
[ ] Business Trust
[ ] Other (Specify)

2. Principal Place of Business and Contact Information

Name of Issuer

CARDIODX INC

Street Address 1

2500 FABER PLACE

Street Address 2

City	State/Province/Country	ZIP/PostalCode	Phone Number of Issuer
PALO ALTO	CALIFORNIA	94303	(650) 475-2788

3. Related Persons

Last Name | First Name | Middle Name

Last Name	First Name	Middle Name
Levison	David	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: [X] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Byers	Brook	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Enright	Patrick	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Ericson	William	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Pappas	Arthur	M.

Street Address 1: 2500 Faber Place
Street Address 2:
City: Palo Alto
State/Province/Country: CALIFORNIA
ZIP/PostalCode: 94303
Relationship: ☐ Executive Officer ☒ Director ☐ Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Lange	Louis	G.

Street Address 1: 2500 Faber Place
Street Address 2:
City: Palo Alto
State/Province/Country: CALIFORNIA
ZIP/PostalCode: 94303
Relationship: ☐ Executive Officer ☒ Director ☐ Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Cohen	Fred	

Street Address 1: 2500 Faber Place
Street Address 2:
City: Palo Alto
State/Province/Country: CALIFORNIA
ZIP/PostalCode: 94303
Relationship: ☐ Executive Officer ☒ Director ☐ Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Torres	Rafael	

Street Address 1: 2500 Faber Place
Street Address 2:

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: ☐ Executive Officer ☒ Director ☐ Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Paye	Amy	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: ☒ Executive Officer ☐ Director ☐ Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Weeks	Mark	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: ☒ Executive Officer ☐ Director ☐ Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Rosenberg	Steven	

Street Address 1	Street Address 2
2500 Faber Place	

City	State/Province/Country	ZIP/PostalCode
Palo Alto	CALIFORNIA	94303

Relationship: ☒ Executive Officer ☐ Director ☐ Promoter

Clarification of Response (if Necessary):

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4. Industry Group

- [ ] Agriculture
- Banking & Financial Services
  - [ ] Commercial Banking
  - [ ] Insurance
  - [ ] Investing
  - [ ] Investment Banking
  - [ ] Pooled Investment Fund

    Is the issuer registered as an investment company under the Investment Company Act of 1940?

    [ ] Yes [ ] No
  - [ ] Other Banking & Financial Services
- [ ] Business Services
- Energy
  - [ ] Coal Mining
  - [ ] Electric Utilities
  - [ ] Energy Conservation
  - [ ] Environmental Services
  - [ ] Oil & Gas
  - [ ] Other Energy
- Health Care
  - [X] Biotechnology
  - [ ] Health Insurance
  - [ ] Hospitals & Physicians
  - [ ] Pharmaceuticals
  - [ ] Other Health Care
- [ ] Manufacturing
- Real Estate
  - [ ] Commercial
  - [ ] Construction
  - [ ] REITS & Finance
  - [ ] Residential
  - [ ] Other Real Estate
- [ ] Retailing
- [ ] Restaurants
- Technology
  - [ ] Computers
  - [ ] Telecommunications
  - [ ] Other Technology
- Travel
  - [ ] Airlines & Airports
  - [ ] Lodging & Conventions
  - [ ] Tourism & Travel Services
  - [ ] Other Travel
- [ ] Other

5. Issuer Size

Revenue Range	OR Aggregate Net Asset Value Range
[ ] No Revenues	[ ] No Aggregate Net Asset Value
[ ] $1 - $1,000,000	[ ] $1 - $5,000,000
[ ] $1,000,001 - $5,000,000	[ ] $5,000,001 - $25,000,000
[ ] $5,000,001 - $25,000,000	[ ] $25,000,001 - $50,000,000
[ ] $25,000,001 - $100,000,000	[ ] $50,000,001 - $100,000,000
[ ] Over $100,000,000	[ ] Over $100,000,000
[X] Decline to Disclose	[ ] Decline to Disclose
[ ] Not Applicable	[ ] Not Applicable

6. Federal Exemption(s) and Exclusion(s) Claimed (select all that apply)

- [ ] Rule 504(b)(1) (not (i), (ii) or (iii))
- [ ] Rule 504 (b)(1)(i)
- [ ] Rule 504 (b)(1)(ii)
- [ ] Rule 504 (b)(1)(iii)
- [ ] Rule 505
- [X] Rule 506
- [ ] Securities Act Section 4(5)
- [ ] Investment Company Act Section 3(c)
  - [ ] Section 3(c)(1)
  - [ ] Section 3(c)(2)
  - [ ] Section 3(c)(3)
  - [ ] Section 3(c)(4)
  - [ ] Section 3(c)(5)
  - [ ] Section 3(c)(6)
  - [ ] Section 3(c)(7)
  - [ ] Section 3(c)(9)
  - [ ] Section 3(c)(10)
  - [ ] Section 3(c)(11)
  - [ ] Section 3(c)(12)
  - [ ] Section 3(c)(13)
  - [ ] Section 3(c)(14)

7. Type of Filing

- [X] New Notice Date of First Sale 2011-02-17 [ ] First Sale Yet to Occur
- [ ] Amendment

8. Duration of Offering

Does the Issuer intend this offering to last more than one year? [ ] Yes [X] No

9. Type(s) of Securities Offered (select all that apply)

[X]	Equity	[ ]	Pooled Investment Fund Interests
[ ]	Debt	[ ]	Tenant-in-Common Securities
[X]	Option, Warrant or Other Right to Acquire Another Security	[ ]	Mineral Property Securities
[X]	Security to be Acquired Upon Exercise of Option, Warrant or Other Right to Acquire Security	[X]	Other (describe)

Sale/issuance of (i) Series AA Preferred Stock, (ii) Series BB Preferred Stock, (iii) Warrants, (iv) Series AA Preferred Stock underlying Warrants and (v) Common Stock issuable upon conversion of Series AA Preferred Stock or Series BB Preferred Stock

10. Business Combination Transaction

Is this offering being made in connection with a business combination transaction, such as a merger, acquisition or exchange offer? ☐ Yes ☒ No

Clarification of Response (if Necessary):

11. Minimum Investment

Minimum investment accepted from any outside investor $0 USD

12. Sales Compensation

Recipient		Recipient CRD Number	☒ None	
(Associated) Broker or Dealer	☒ None	(Associated) Broker or Dealer CRD Number	☒ None	
Street Address 1		Street Address 2		
City		State/Province/Country		ZIP/Postal Code
State(s) of Solicitation (select all that apply) Check "All States" or check individual States	☐ All States	☐ Foreign/non-US		

13. Offering and Sales Amounts

Total Offering Amount	$78,325,737 USD	or ☐ Indefinite
Total Amount Sold	$57,491,448 USD	
Total Remaining to be Sold	$20,834,289 USD	or ☐ Indefinite

Clarification of Response (if Necessary):

Total offering and sales amounts assume the exercise of warrants ($3,359,837.00)

14. Investors

☐	Select if securities in the offering have been or may be sold to persons who do not qualify as accredited investors, and enter the number of such non-accredited investors who already have invested in the offering.	
	Regardless of whether securities in the offering have been or may be sold to persons who do not qualify as accredited investors, enter the total number of investors who already have invested in the offering:	17

15. Sales Commissions & Finder's Fees Expenses

Provide separately the amounts of sales commissions and finders fees expenses, if any. If the amount of an expenditure is not known, provide an estimate and check the box next to the amount.

Sales Commissions $0 USD ☐ Estimate

Finders' Fees $0 USD ☐ Estimate

Clarification of Response (if Necessary):

16. Use of Proceeds

Provide the amount of the gross proceeds of the offering that has been or is proposed to be used for payments to any of the persons required to be named as executive officers, directors or promoters in response to Item 3 above. If the amount is unknown, provide an estimate and check the box next to the amount.

$2,279,507 USD ☒ Estimate

Clarification of Response (if Necessary):

This estimate excludes amounts paid and that may be paid to the law firm which two executive officers were/are affiliated.

Signature and Submission

Please verify the information you have entered and review the Terms of Submission below before signing and clicking SUBMIT below to file this notice.

Terms of Submission

In submitting this notice, each issuer named above is:

- Notifying the SEC and/or each State in which this notice is filed of the offering of securities described and undertaking to furnish them, upon written request, in the accordance with applicable law, the information furnished to offerees.*

- Irrevocably appointing each of the Secretary of the SEC and, the Securities Administrator or other legally designated officer of the State in which the issuer maintains its principal place of business and any State in which this notice is filed, as its agents for service of process, and agreeing that these persons may accept service on its behalf, of any notice, process or pleading, and further agreeing that such service may be made by registered or certified mail, in any Federal or state action, administrative proceeding, or arbitration brought against it in any place subject to the jurisdiction of the United States, if the action, proceeding or arbitration (a) arises out of any activity in connection with the offering of securities that is the subject of this notice, and (b) is founded, directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these statutes, or (ii) the laws of the State in which the issuer maintains its principal place of business or any State in which this notice is filed.

- Certifying that, if the issuer is claiming a Rule 505 exemption, the issuer is not disqualified from relying on Rule 505 for one of the reasons stated in Rule 505(b)(2)(iii).

Each Issuer identified above has read this notice, knows the contents to be true, and has duly caused this notice to be signed on its behalf by the undersigned duly authorized person.

For signature, type in the signer's name or other letters or characters adopted or authorized as the signer's signature.

Issuer	Signature	Name of Signer	Title	Date
CARDIODX INC	/s/ David Levison	David Levison	President and CEO	2011-03-02

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

* This undertaking does not affect any limits Section 102(a) of the National Securities Markets Improvement Act of 1996 ("NSMIA") [Pub. L. No. 104-290, 110 Stat. 3416 (Oct. 11, 1996)] imposes on the ability of States to require information. As a result, if the securities that are the subject of this Form D are "covered securities" for purposes of NSMIA, whether in all instances or due to the nature of the offering that is the subject of this Form D, States cannot routinely require offering materials under this undertaking or otherwise and can require offering materials only to the extent NSMIA permits them to do so under NSMIA's preservation of their anti-fraud authority.

S-1/A 1 a2218080zs-1a.htm S-1/A

Use these links to rapidly review the document

As filed with the Securities and Exchange Commission on April 28, 2014

Registration No. 333-191698

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Amendment No. 4
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CARDIODX, INC.
(Exact name of Registrant as specified in its charter)

Delaware	**8071**	**65-1198370**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

CardioDx, Inc.
2500 Faber Place
Palo Alto, California 94303
(650) 475-2788
(Address, including zip code and telephone number,
of Registrant's principal executive offices)

David L. Levison
President and Chief Executive Officer
CardioDx, Inc.
2500 Faber Place
Palo Alto, California 94303
(650) 475-2788
(Name, address, including zip code and telephone number,
including area code, of agent for service)

Copies to:

Mark B. Weeks
David G. Peinsipp
Cooley LLP
3175 Hanover Street
Palo Alto, California 94304
(650) 843-5000

Bruce K. Dallas
Davis Polk & Wardwell LLP
1600 El Camino Real
Menlo Park, California 94025
(650) 752-2000

Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer ☒ (Do not check if a smaller reporting company)	Smaller reporting company ☐

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to said Section 8(a), may determine.

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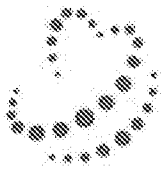
The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED APRIL 28, 2014

PRELIMINARY PROSPECTUS

Shares



CARDIODX®

Common Stock

This is CardioDx's initial public offering. We are selling shares of our common stock.

We expect the public offering price to be between $ and $ per share. Currently, no public market exists for the shares. After pricing of the offering, we expect that the shares will trade on the NASDAQ Global Market under the symbol "CDX."

We are an "emerging growth company" under federal securities laws and, as such, will be subject to reduced public company reporting requirements.

Investing in the common stock involves risks that are described in the "Risk Factors" section beginning on page 12 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public offering price	$	$
Underwriting discount[1]		
Proceeds to CardioDx, before expenses		

(1) See "Underwriting."

The underwriters may also exercise their option to purchase up to an additional shares from us, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus.

Entities affiliated with certain of our existing stockholders have indicated an interest in purchasing an aggregate of approximately in shares of our common stock in this offering at the initial public

offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these potential investors and any of these potential investors could determine to purchase more, less or no shares in this offering.

The shares will be ready for delivery on or about , 2014.

Book-Running Managers

Jefferies **Piper Jaffray**

Co-Manager

William Blair

Prospectus dated , 2014.

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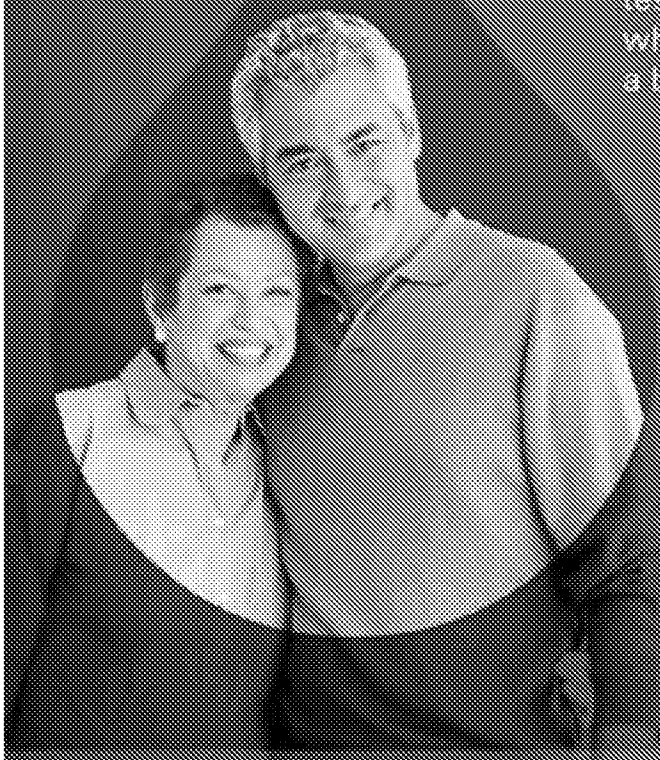
CARDIODX

Are you experiencing any of the following symptoms?

- Chest discomfort
- Fatigue
- Shortness of breath
- Dizziness
- Heartburn
- Abdominal discomfort
- Nausea



Corus® CAD is a simple, sex-specific blood test that can help your doctor determine whether or not your symptoms are due to a blockage in your heart.

CORUS® CAD

Ask your doctor about Corus CAD today!

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We and the underwriters have not authorized anyone to give any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock.

Through and including , 2014 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who come into possession of this prospectus and any applicable free writing prospectus we have prepared in jurisdictions outside the United States are required to inform themselves

about and to observe any restrictions in this offering and the distribution of this prospectus and any such free writing prospectus applicable to that jurisdiction.

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PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should read the entire prospectus carefully, including the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus. Unless the context suggests otherwise, references in this prospectus to "CardioDx," the "Company," "we," "us" and "our" refer to CardioDx, Inc.

Company Overview

We are a molecular diagnostics company developing and commercializing novel, proprietary tests that help improve treatment decisions, enhance patient outcomes and reduce the overall cost of care. We use genomic technologies to provide healthcare professionals with critical, actionable information to improve patient care and management. Our product strategy addresses the needs of three key healthcare constituents: patients, healthcare providers and public and private payers. Our initial focus is on diagnostics for cardiovascular diseases, specifically coronary artery disease, or CAD, arrhythmia and heart failure.

Our Corus® CAD test is the first and only commercially available blood-based gene expression test that provides a current-state assessment for non-diabetic patients with symptoms that are suggestive of obstructive CAD. Corus CAD helps clinicians rule out obstructive CAD as the cause of these symptoms. Ruling out CAD as the cause of these symptoms can help avoid significant costs, risks and inconveniences associated with unnecessary referrals, non-invasive imaging and invasive coronary angiography, also known as cardiac catheterization. Our test has been clinically validated in independent patient cohorts, including two prospective, multicenter U.S. trials, PREDICT and COMPASS. Corus CAD became commercially available in 2009 and, through December 31, 2013, we have delivered results for over 55,000 tests. In August 2012, the Corus CAD test obtained Medicare Part B coverage, making the test a covered benefit for the estimated 49 million Medicare beneficiaries in the U.S.

Cardiovascular diseases, or CVDs, are the leading cause of death worldwide. In the U.S., CAD, one of the most common CVDs, accounts for nearly one in six deaths according to the American Heart Association. We estimate that approximately three million non-diabetic patients in the U.S. with no prior revascularization, such as stenting or bypass surgery, and no prior myocardial infarction (heart attack) visit their primary care provider each year complaining of symptoms that may be suggestive of obstructive CAD. Studies have shown that only approximately 10% of patients who present to their primary care providers with symptoms suggestive of obstructive CAD actually have obstructive CAD, while the remaining approximately 90% of patients have symptoms that stem from other conditions, most of which are typically less urgent, such as musculoskeletal disorders, gastrointestinal disease and psychosocial syndromes. Nevertheless, patients' and providers' concern that the symptoms could be due to a cardiac cause, coupled with providers' concern for malpractice claims, have led physicians to over-refer patients to specialists and aggressively pursue costly and time-consuming cardiac diagnostic work-ups. We estimate that the total amount spent in the U.S. each year on these diagnostic work-ups, including non-

invasive and invasive tests, in the non-diabetic population with no prior revascularization or myocardial infarction is approximately $5.9 billion. The $5.9 billion accounts for costs of advanced cardiac testing for patients initially evaluated in the primary care setting or cardiology offices.

Despite the significant cost and use of existing non-invasive diagnostic tests such as myocardial perfusion imaging, or MPI, stress echocardiography and exercise electrocardiogram, only approximately 40% of patients who are referred for elective invasive coronary angiography are found to have actionable, obstructive

CAD. The over-utilization of non-invasive and invasive cardiac diagnostic testing has a negative impact on three key healthcare constituents:

- patients, who undergo unnecessary physician visits, testing and invasive procedures and are exposed to substantial medical risks, including procedural complications, side effects and high levels of radiation;
- providers, who spend time and resources pursuing incorrect diagnoses, resulting in potential delays in delivering appropriate treatment and lower patient satisfaction; and
- payers, who experience higher overall healthcare costs, including those resulting from unnecessary tests and referrals to specialists.

In light of the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the PPACA, both public and private payers are focused on lowering healthcare costs—or at least ameliorating the current rapid expansion of costs—and increasing efficiency of care. Managed care organizations and other payers continue to look for ways to promote interventions that are more effective for select groups of patients and that therefore provide an appropriate balance of benefits, risks and costs. As healthcare reform is implemented, we expect that there will be even more emphasis placed on avoiding procedures that have a low probability of changing a clinical decision, especially in large patient populations with high treatment costs such as the CAD market. We believe the gatekeeper nature of the Corus CAD test is well suited for this evolving healthcare landscape.

Market Opportunity

CVDs are the leading cause of death worldwide, representing 30% of all global deaths. The World Health Organization estimates that in 2008, 17.3 million people died from some form of CVD, mainly coronary heart disease and stroke. In the U.S. alone, according to the American Heart Association, CVDs accounted for almost 800,000 deaths in 2009, or about one in three deaths. The American Heart Association projects that by 2030, over 40% of the U.S. population will have some form of CVD.

CAD is a subset of cardiovascular disease and is one of the most common types of heart disease. In 2008, an estimated 7.3 million people worldwide died of CAD. In the U.S., CAD caused one in six deaths in 2009. According to the American Heart Association, in 2010, CAD alone was projected to cost

$108.9 billion in the U.S., including the cost of healthcare services, medications and lost productivity, with the total projected annual cost reaching $218.7 billion by 2030.

The heightened public awareness of CAD and its symptoms and morbidity rates lead many patients to seek medical advice at the first sign of symptoms. Each year in the U.S. alone, approximately three million non-diabetic patients with no prior revascularization or myocardial infarction present in primary care offices with symptoms that can be suggestive of CAD. An additional approximately eight million patients present directly to hospital emergency departments each year with chest pain.

Currently, those patients who present in outpatient settings undergo a number of different diagnostic tests and procedures in connection with the typical patient work-up to assess for obstructive CAD. These tests and procedures include, but are not limited to:

- non-invasive testing such as stress echocardiography, MPI and cardiac computed tomographic angiography; and
- invasive coronary angiography.

There is significant variation among clinicians in the type, number and sequence of tests ordered to evaluate patients with typical or atypical symptoms suggestive of obstructive CAD. Discordant or indeterminate results from such tests are common particularly because of the subjectivity in interpreting the test results, and they can lead to additional testing or premature or unnecessary referral for invasive coronary angiography. The currently available non-invasive and invasive diagnostic tests for ruling out

obstructive CAD in patients presenting with typical or atypical symptoms have substantial medical risks including complications, side effects and radiation exposure. Additionally, current usual care results in significant patient inconvenience, including loss of time associated with multiple referrals from one clinician to another, waiting periods to schedule additional appointments and the duration of the tests or procedures ordered, as well as other inconveniences associated with the tests or procedures.

We estimate that the total amount spent on advanced non-invasive and invasive procedures for the non-diabetic patient population who initially present in primary care or cardiology offices with no prior revascularization or myocardial infarction in the U.S. is approximately $5.9 billion per year. Of this amount, approximately $3.0 billion is spent on MPIs, and $2.1 billion is spent on invasive coronary angiographies.

Despite the significant cost and widespread use of existing non-invasive diagnostic tests such as MPI, the majority of patients referred for invasive coronary angiography do not have obstructive CAD. In 2010, data from the National Cardiovascular Data Registry, or NCDR, revealed that only approximately 40% of nearly 400,000 patients undergoing elective invasive coronary angiography had obstructive CAD. Of the approximately 60% of patients who underwent catheterization but were found not to have obstructive CAD, the significant majority (approximately 85%) of these patients had undergone at least one non-invasive diagnostic test for CAD prior to their catheterization.

A clear need exists for a more accurate, safer and more convenient test to initially rule out patients with a low risk of obstructive CAD as the source of their symptoms. A better clinical paradigm would accurately rule out patients early in the diagnosis process, reducing unnecessary procedures, referrals, costs and risks, thereby benefiting patients, providers and payers.

Our Solution

Corus CAD is our clinically validated blood-based test for ruling out obstructive CAD in patients with symptoms suggestive of obstructive CAD. Our intended use population includes non-diabetic patients with, among other things, no prior revascularization or myocardial infarction. Corus CAD is a proprietary gene expression test that measures the expression levels of 23 distinct messenger RNA, or mRNA, sequences, the majority of which are known to be associated with atherosclerosis and involved in inflammation, cell death, and adaptive and innate immunity. In addition to gene expression levels, the Corus CAD algorithm incorporates the age and gender of the patient, which are also known to affect the likelihood of coronary disease. The test requires only a single routine blood draw, and the test result is generally available within 48 to 72 hours. The Corus CAD test does not subject patients to risks associated with other tests or procedures, including complications, side effects and radiation exposure, or delays associated with scheduling and performing other tests or procedures. The Corus CAD test yields a score along a 1 to 40 scale, with a lower score representing a lower likelihood of obstructive CAD. Used as an initial test, the Corus CAD test helps primary care clinicians and cardiologists evaluate whether to refer a patient for further cardiac testing or investigate other causes for the patient's symptoms. We perform the Corus CAD test in our clinical laboratory, which has been certified according to the Clinical Laboratory Improvement Amendments of 1988, or CLIA, under the regulations of the Centers for Medicare & Medicaid Services, or CMS, and also has been accredited by the College of American Pathologists, or CAP. In connection with our planned move to a new facility in the second quarter of 2014 to replace our existing corporate headquarters, including our laboratory space, we will need to replicate our testing processes and results in our new facility, and there can be no assurance that we will be able to do so prior to the time the lease for our current laboratory expires.

Two prospective, multi-center clinical trials, PREDICT and COMPASS, validated the performance of the Corus CAD test in determining the likelihood of obstructive CAD in patient populations previously referred for invasive coronary angiography and MPI, respectively. MPI is a widely used non-invasive test to evaluate patients suspected of having obstructive CAD. In the COMPASS trial, at a score threshold of 15 or less, Corus CAD showed a sensitivity of 89% and a negative predictive value, or NPV, of 96%, compared to MPI, which showed a sensitivity of 27% and NPV of 88%. Sensitivity is the proportion of patients with disease

who test positive. NPV is the proportion of patients who test negative who do not have disease. The COMPASS results demonstrate that a low Corus CAD score (test score ≤15) has higher overall diagnostic accuracy than MPI for determining the absence of obstructive CAD. We believe the improved sensitivity and NPV of Corus CAD over MPI better position the Corus CAD test to identify low-risk patients initially presenting with typical or atypical symptoms suggestive of CAD.

We have developed a robust evidence package to support the performance and utility of Corus CAD, which we use to educate clinicians and payers. In August 2012, our Corus CAD test obtained Medicare Part B coverage from Palmetto GBA, or Palmetto, the regional Medicare Administrative Contractor, or MAC, in California, for dates of service from January 1, 2012. On September 16, 2013, the regional MAC

in California transitioned from Palmetto to Noridian Healthcare Solutions, LLC, or Noridian. The coverage for Corus CAD remains effective following this transition. Our coverage by Noridian provides for reimbursement at a fixed payment amount established by Palmetto for tests performed for qualifying Medicare patients throughout the U.S. so long as the tests are performed in our California laboratory. We believe our evidence package was significantly enhanced in 2013 and 2014 due to the publication of the COMPASS study and recent clinical utility studies and we will continue to generate, present and publish evidence to support further adoption of Corus CAD by clinicians and payers. However, no commercial third-party payer to date has made a positive coverage decision for Corus CAD. In addition, in connection with their standard review processes, several commercial third-party payers have made non-coverage determinations for Corus CAD, and some large commercial third-party payers have recently maintained existing non-coverage determinations for Corus CAD.

We believe the gatekeeper nature of the Corus CAD test benefits patients, providers and payers by improving the quality and efficiency of care.

Commercialization Strategy

Our goal is for Corus CAD to be the primary first-line test used in a diagnostic work-up to assess the likelihood of obstructive CAD in symptomatic, non-diabetic patients. To succeed, we must significantly increase the commercial adoption of Corus CAD by:

- broadening payer coverage and reimbursement;
- expanding our sales presence;
- increasing market awareness;
- expanding our clinical and economic utility data; and
- pursuing relationships with commercial partners.

Future Growth Opportunities

We believe we can leverage our research expertise and commercial experience to develop additional revenue opportunities. Our research and development efforts focus on three principal areas:

- product line extensions or enhancements to expand the scope of our intended use population and indications or the development of additional algorithms that target specific patient populations, including the development of a Corus CAD test appropriate for diabetics;
- new product development in other areas of CVD, including our ongoing arrhythmia program; and
- technology platform development to increase efficiency and lower costs in our testing and laboratory operations.

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Financial Overview

Prior to Corus CAD obtaining Medicare Part B coverage in August 2012, we maintained a limited commercial sales force as we focused our efforts primarily on (1) developing and validating our test algorithm, (2) obtaining the necessary certifications and licensures for our laboratory, (3) launching and establishing early commercial experience with our test and (4) generating the clinical validity, clinical utility and economic value data necessary to create a robust evidence package that would be used to obtain reimbursement of our test and support clinician adoption. As a result, we generated nominal revenue and incurred significant operating losses over this period.

Subsequent to Corus CAD obtaining Medicare Part B coverage in August 2012, and in anticipation of additional positive private payer decisions, we began to expand our commercial presence by increasing the size of our sales force and enhancing our marketing efforts. In the year ended December 31, 2013, we delivered results for 22,371 tests and generated $8.0 million in revenue. As of December 31, 2013, our total stockholders' deficit was $129.6 million and we had $26.6 million in cash, cash equivalents and investments.

Risks That We Face

Our business is subject to numerous risks and uncertainties, including those highlighted in the section entitled "Risk Factors" immediately following this prospectus summary. These risks include, among others, the following:

- Our financial results currently depend almost entirely on the sales of one product, our Corus CAD test, and we will need to generate significant revenue from this test in order to achieve profitability.
- We have a limited commercial history. We have incurred significant losses since our inception, and we expect to incur losses for the current fiscal year and the next several years.
- Our strategy depends on achieving greater market acceptance of our Corus CAD test, which will require us to expand our sales and marketing capabilities in order to increase demand for the test, expand geographically and obtain favorable reimbursement determinations from third-party payers.
- Health insurers and other third-party payers may decide not to cover our diagnostic products or may provide inadequate reimbursement, which could jeopardize our commercial prospects.
- Medicare reimbursements currently comprise a significant portion of our revenue, and we may not be able to maintain or increase the number of our tests reimbursed by Medicare or their reimbursement levels.
-

If we are unable to compete successfully, we may be unable to increase or sustain our revenue or achieve profitability.

- Healthcare reform measures could hinder or prevent the commercial success of Corus CAD.
- Changes in Medicare Administrative Contractor services could alter current Medicare coverage or payment amounts.
- Our Medicare Part B coverage is not a formal coverage determination by CMS, and any future adverse coverage decisions by CMS could substantially reduce our revenue.
- We do not currently have any issued patents covering Corus CAD. We may be unable to obtain, maintain and enforce the patent and other intellectual property rights necessary to protect our technologies and tests.

- Our business is subject to complex and sometimes unpredictable government regulations. If we fail to comply with these regulations, we could incur significant fines and penalties.

Corporate Information

We were incorporated in Delaware as CardioDx, Inc. in July 2003. Our principal executive offices are located at 2500 Faber Place, Palo Alto, California 94303, and our telephone number is (650) 475-2788. Our website address is www.cardiodx.com. Information contained on or accessible through our website is not a part of this prospectus and should not be relied upon in determining whether to make an investment decision.

CardioDx®, the CardioDx logo, Corus® and other trade names, trademarks or service marks of CardioDx appearing in this prospectus are the property of CardioDx. Trade names, trademarks and service marks of other companies appearing in this prospectus are the property of their respective holders. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

We are an "emerging growth company" as defined in the recently enacted Jumpstart Our Business Startups Act, or the JOBS Act, and therefore we may take advantage of certain exemptions from various public company reporting requirements, including not being required to have our internal controls over financial reporting audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments. We may take advantage of these exemptions until we are no longer an "emerging growth company." In addition, the JOBS Act provides that an "emerging growth company" can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption, and, therefore, we will

be subject to the same new or revised accounting standards as other public companies that are not "emerging growth companies." We will remain an "emerging growth company" until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of this offering, (b) in which we have total annual gross revenue of at least $1.0 billion or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

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The Offering

Common stock offered by us	shares
Common stock to be outstanding after this offering	shares
Option to purchase additional shares	The underwriters have an option to purchase up to additional shares of our common stock.
Use of proceeds	We estimate that our net proceeds from this offering will be approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full), based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering as follows: • approximately $ million to provide working capital to expand our commercial organization, including sales and marketing personnel; • approximately $ million to conduct additional clinical and marketing activities to enhance our evidence package for Corus CAD; and • the remainder for research and development purposes as well as for general corporate purposes. We may also use a portion of the net proceeds from this offering for acquisitions of, or investments in, technologies, solutions or businesses that complement our business, although we have no

present commitments or agreements to enter into such acquisitions or investments. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our commercialization efforts, the status of additional payer reimbursement coverage determinations for Corus CAD and the results of our research and development efforts. In particular, if we do not obtain positive coverage decisions from commercial payers in a timely manner, we may decide to postpone expansion of our commercial organization, including sales and marketing personnel, and reallocate that portion of the net proceeds from this offering to clinical and marketing activities to obtain such positive coverage decisions and to fund continuing operating losses during that additional time. In that event, we may also reallocate certain of such net proceeds from this offering for general corporate purposes. Accordingly, we will have broad discretion over the uses of the net proceeds from this offering.

	Pending these uses, we intend to invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market funds, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government. See "Use of Proceeds" for additional information.
Risk factors	See "Risk Factors" beginning on page 12 and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Proposed NASDAQ Global Market symbol	CDX

Entities affiliated with certain of our existing stockholders have indicated an interest in purchasing an aggregate of approximately in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these potential investors and any of these potential investors could determine to purchase more, less or no shares in this offering. Any shares purchased by these potential investors that are our affiliates will be subject to lock-up restrictions described in the section of this prospectus entitled "Shares Eligible for Future Sale."

The number of shares of our common stock to be outstanding after this offering is based on 12,114,314 shares of our common stock (including preferred stock on an as-converted basis) outstanding as of March 31, 2014, and excludes:

- 2,180,043 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2014, pursuant to our 2004 Stock Plan, or our 2004 Plan, at a weighted-average exercise price of $3.56 per share;

- 138 shares of common stock issuable upon the exercise of common stock warrants outstanding as of March 31, 2014, at a weighted-average exercise price of $91.35 per share;
- 345,952 shares of common stock issuable upon the exercise of preferred stock warrants outstanding as of March 31, 2014, at a weighted-average exercise price of $13.74 per share;
- 323,850 shares of common stock reserved for future issuance under our 2004 Plan as of March 31, 2014, which shares will cease to become available for future issuance at the time our 2013 Equity Incentive Plan, or our 2013 Plan, becomes effective in connection with this offering;
- 3,646,750 shares of common stock reserved for future issuance under our 2013 Plan (which consist of (i) 1,142,857 shares of common stock reserved for issuance under our 2013 Plan; (ii) 323,850 shares of common stock reserved for issuance under our 2004 Plan as of March 31, 2014, which shares will be added to the shares reserved under the 2013 Plan upon its effectiveness; and (iii) up to 2,180,043 additional shares as of March 31, 2014 that may be added to the 2013 Plan upon the expiration, termination, forfeiture or other reacquisition of any shares of common stock issuable upon the exercise of stock awards outstanding under the 2004 Plan), which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 500,000 shares of common stock to be reserved for issuance under our 2013 Employee Stock Purchase Plan, to be effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

In addition, unless we specifically state otherwise, all information in this prospectus assumes:

- a 1-for-10.5 reverse stock split of our common stock and preferred stock effected on November 13, 2013;
- the filing of our amended and restated certificate of incorporation in Delaware and the adoption of our amended and restated bylaws, each of which will occur immediately upon the completion of this offering;
- the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 12,072,045 shares of common stock immediately prior to the closing of this offering;
-

the automatic conversion of all outstanding preferred stock warrants into warrants to purchase an aggregate of 345,952 shares of common stock immediately prior to the closing of this offering;

- no exercise of outstanding options or outstanding warrants; and
- no exercise of the underwriters' option to purchase up to an additional shares of common stock.

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Summary Financial Data

The following tables summarize our financial data. You should read this summary financial data together with the sections titled "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as our financial statements and related notes included elsewhere in this prospectus.

We have derived the statements of operations data for the years ended December 31, 2012 and 2013 from our audited financial statements that are included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected for the full year or for any period in the future.

	Year Ended December 31,	
	2012	2013
	(in thousands, except share and per share data)	
Statements of Operations Data:		
Revenue	$ 2,475	$ 7,966
Operating expenses:		
Cost of revenue	4,680	7,320
Research and development	8,312	10,634
Sales and marketing	7,989	15,654
General and administrative	7,221	11,351
Total operating expenses	28,202	44,959
Loss from operations	(25,727)	(36,993)
Interest income	71	100
Other income, net	17	22
Net loss	(25,639)	(36,871)
Accretion and dividends on convertible preferred stock to redemption value	(9,194)	(12,043)
Net loss attributable to common stockholders	$ (34,833)	$ (48,914)
Net loss per share attributable to common stockholders(1):		

Basic and diluted	$ (3,909.87)	$ (2,399.74)
Weighted average shares of common stock used in computing net loss per share attributable to common stockholders:		
Basic and diluted	8,909	20,383
Pro forma net loss per share of common stock, basic and diluted (unaudited)		$ (3.05)
Weighted-average shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)		12,092,040

(1) See Note 2 within the notes to our financial statements appearing elsewhere in this prospectus for a description of the method used to calculate basic and diluted net loss per common share and pro forma basic and diluted net loss per common share.

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	As of December 31, 2013		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)
		(in thousands) (unaudited)	
Balance Sheet Data:			
Cash, cash equivalents and investments	$ 26,554	$ 26,554	
Working capital	23,256	23,256	
Total assets	37,694	37,694	
Convertible preferred stock	159,202	—	—
Total stockholders' equity (deficit)	(129,643)	30,027	

(1) Gives effect to the automatic conversion of all outstanding shares of preferred stock into 12,072,045 shares of common stock immediately prior to the closing of this offering, the reclassification of the preferred stock warrant liability of $468,000 as of December 31, 2013 into stockholders' equity and the filing and effectiveness of our amended and restated certificate of incorporation in Delaware to be effective upon the closing of this offering.

(2) Reflects, in addition to the pro forma adjustments set forth above, the sale by us of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below and all of the other information included in this prospectus, including our financial statements and related notes and the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," before you decide to purchase shares of our common stock. If any of the following risks actually occurs, it may harm our business, prospects, financial condition and operating results. As a result, the trading price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business

Our financial results currently depend almost entirely on the sales of one product, our Corus CAD test, and we will need to generate significant revenue from this test in order to achieve profitability.

We expect to continue to derive substantially all of our revenue from sales of one product, our Corus® CAD test for coronary artery disease, or CAD, for the foreseeable future. We currently have no other products for sale and may never be able to develop products other than Corus CAD. If we are unable to increase sales and establish significant levels of adoption of and reimbursement for our Corus CAD test, we may never be able to achieve profitability. There is not currently widespread awareness or adoption of the Corus CAD test among clinicians, and we have limited reimbursement coverage for the Corus CAD test available through government and private payers in the U.S. In addition, we have a relatively small sales force that, as of March 31, 2014, offered Corus CAD in a total of 36 U.S. communities in 15 states. Our ability to increase sales and establish significant levels of adoption and reimbursement for our Corus CAD test is uncertain, and we may never be able to achieve profitability for many reasons, including, among others:

- Corus CAD may not achieve widespread adoption among clinicians and payers;
- third-party payers, such as insurance companies and government insurance programs, may decide not to reimburse for Corus CAD, or may set the amounts of such reimbursements at prices that do not allow us to cover our expenses;
- the results of our clinical trials and any additional clinical and economic utility data that we may develop, present and publish may not reach the level of statistical or clinical significance required to convince clinicians or payers of the value of Corus CAD;
- our sales and marketing efforts may fail to effectively reach clinicians and third-party payers and communicate the benefits of using Corus CAD;
- a more effective or less expensive diagnostic test for CAD may be developed;
- the U.S. Food and Drug Administration, or FDA, or other regulatory bodies may adopt new regulations that impose significant restrictions on our ability to market and sell Corus CAD; and
-

we may fail to adequately protect our intellectual property relating to Corus CAD.

We have a limited commercial history. We have incurred significant losses since our inception, and we expect to incur losses for the current fiscal year and the next several years.

We have a limited commercial history. Substantially all of our revenue to date has been derived from our Corus CAD test, which we launched in June 2009, but for which we did not generate meaningful revenue until we obtained Medicare Part B coverage in August 2012. Our limited commercial history may make it difficult to evaluate our current business and makes predictions about our future results, prospects or viability subject to significant uncertainty. We will continue to encounter risks and difficulties frequently experienced by early commercial-stage companies, including scaling up our infrastructure and headcount, and may encounter unforeseen expenses, difficulties or delays in connection with our expansion.

We incurred a net loss of $25.6 million and $36.9 million for the years ended December 31, 2012 and 2013, respectively, and have incurred significant losses since our inception in 2003. As of December 31, 2013, we had an accumulated deficit of $184.3 million. We anticipate incurring losses for the next several years as we increase expenses to support our efforts to increase market share for the Corus CAD test and develop and commercialize new diagnostic tests.

Historically, our losses have resulted principally from research and development programs, our sales and marketing efforts, our general and administrative expenses and costs associated with performing unreimbursed tests. We expect to continue to incur significant operating expenses and anticipate that our expenses and losses will increase due to costs relating to, among other things:

- expansion of the size and geographic reach of our sales force and our marketing capabilities to increase market awareness and acceptance of our Corus CAD test;
- developing, presenting and publishing additional clinical and economic utility data intended to increase payer coverage and clinician adoption;
- expansion of our operating capabilities;
- development of, and, as necessary, pursuit of regulatory approvals for, new diagnostic tests;
- maintenance, expansion and protection of our intellectual property portfolio and trade secrets;
- any future clinical trials;
- employment of additional clinical, quality control, scientific, customer service, laboratory, billing and reimbursement and management personnel; and
-

employment of operational, financial, accounting and information systems personnel, consistent with expanding our operations and our status as a newly public company following this offering.

To become profitable, we must succeed in increasing sales of our Corus CAD test or develop and commercialize new tests with significant market potential. We may never succeed in these activities and may never generate revenue that is sufficient to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain consistently profitable would decrease the market price of our common stock and could significantly impair our ability to raise capital, expand our business or continue to pursue our growth strategy.

Our strategy depends on achieving greater market acceptance of our Corus CAD test, which will require us to expand our sales and marketing capabilities in order to increase demand for the test, expand geographically and obtain favorable reimbursement determinations from third-party payers. If we are unsuccessful in one or more of these efforts, we may not be able to increase our revenue and achieve profitability.

In order to achieve greater market acceptance of our Corus CAD test, we must continue to demonstrate to clinicians, healthcare thought leaders and third-party payers that the test is clinically useful and cost-effective and, further, that our test provides improved or additional benefits over existing or alternative diagnostic tests and procedures.

We do not believe our current sales and marketing capacity is sufficient to achieve the level of market awareness and sales required for us to attain significant commercial success for our Corus CAD test, to expand our geographic presence or to successfully commercialize any other diagnostic tests we may develop. In order to increase sales of our Corus CAD test, we will need to:

- expand our direct sales force in the U.S. by recruiting additional sales representatives in selected communities;

- appropriately educate clinicians, healthcare thought leaders and third-party payers regarding the clinical benefits and cost effectiveness of our Corus CAD test, which may require us to conduct expensive, additional clinical trials;
- establish, expand and manage coverage and reimbursement arrangements with third-party payers, and develop, present and publish additional clinical and economic utility data to enhance our evidence package to aid in that effort;
- convince clinicians that performing the test provides a long-term reputational and economic benefit to their practice; and
-

establish appropriate collaboration arrangements with third-party commercial partners who can help expand our commercial reach.

We have limited experience selling and marketing our Corus CAD test nationally or internationally. We intend to hire additional sales and marketing personnel with experience in the diagnostic, medical device or pharmaceutical industries. We may face competition from other companies in these industries, some of whom are much larger than we are and some of whom can pay significantly greater compensation and benefits than we can in seeking to attract and retain qualified sales and marketing employees. If we are unable to hire and retain qualified sales and marketing personnel, our business will suffer.

Health insurers and other third-party payers may decide not to cover our diagnostic products or may provide inadequate reimbursement, which could jeopardize our commercial prospects.

Successful commercialization of Corus CAD depends, in large part, on the availability of coverage and adequate reimbursement from government and commercial payers. For new diagnostic tests, private and government payers decide whether to cover the test, the reimbursement amount for a covered test and the specific conditions for reimbursement. Clinicians and patients may not order a diagnostic test unless third-party payers pay a substantial portion of the test price. Coverage determinations and reimbursement levels and conditions are critical to the commercial success of a diagnostic product, and if we are not able to secure positive coverage determinations and reimbursement levels, our business would be materially adversely affected.

Coverage and reimbursement by a commercial payer may depend on a number of factors, including a payer's determination that our current and future tests are:

- not experimental or investigational;
- medically necessary;
- appropriate for the specific patient;
- cost-saving or cost-effective; and
- supported by peer-reviewed publications.

In addition, several entities conduct technology assessments of new medical tests and devices and provide the results of their assessments for informational purposes to other parties. These assessments may be used by third-party payers and healthcare providers as grounds to deny coverage for or refuse to use a test or procedure. We believe we have received a negative technology assessment from one of these entities and could receive more.

Currently, when a molecular diagnostic test such as Corus CAD is first marketed, it is not considered covered by a payer until that specific payer makes a positive coverage decision regarding the test. Typically, commercial third-party payers will review their coverage decisions for tests such as Corus CAD on at least an annual basis, and such payers will review these coverage decisions based on the available published evidence package at the time of their review. Since each payer makes its own decision as to whether to establish a policy to reimburse for a test, seeking payer coverage and other approvals is a time-consuming

and costly process. We cannot assure you that adequate coverage and reimbursement for the Corus CAD test or future tests will be provided in the future by any third-party payer. We are currently pursuing coverage with several commercial third-party payers. However, no commercial third-party payer to date has made a positive coverage decision for Corus CAD. In addition, in connection with their standard review processes, several commercial third-party payers have made non-coverage determinations for Corus CAD, and some large commercial third-party payers have recently maintained existing non-coverage determinations for Corus CAD. We cannot predict if or when such payers will revisit their coverage decisions or if or when we will obtain a positive coverage determination, and payers may continue to make additional non-coverage determinations.

Our Corus CAD test has obtained a positive coverage determination from Palmetto GBA, or Palmetto, and Noridian Healthcare Solutions, LLC, or Noridian. We have not obtained a national coverage decision with respect to Corus CAD in connection with Medicare Part B, nor have state Medicaid programs issued positive coverage decisions. On September 16, 2013, the regional Medicare Administrative Contractor, or MAC, in California transitioned from Palmetto to Noridian. However, Palmetto continues to establish coverage, coding and reimbursement policies for Corus CAD and other molecular diagnostics in our MAC region pursuant to the MolDx program for molecular diagnostics, while Noridian processes claims for tests performed in our MAC region. We cannot predict whether Noridian will continue to provide coverage at the same reimbursement levels or with the same breadth of coverage in the future, or if it will continue to cover the test at all. Beginning in 2017, we expect the Medicare payment rate for Corus CAD will be reset based on the weighted median of its private payer rates.

The local coverage determination under the MolDx program expressly finds that Corus CAD "meets criteria for analytical and clinical validity, and clinical utility as a reasonable and necessary Medicare benefit." A coverage article formally attached to the local coverage determination provides additional specific guidance relating to the coverage determination. The article provides that Corus CAD is covered for symptomatic Medicare patients with specified typical or atypical symptoms suggestive of obstructive CAD. Patients presenting with atypical symptoms must also present with at least one specified "common CAD Risk Factor," such as hypertension, obesity, family history of heart disease, tobacco use and age (males aged 50 and older and females aged 60 and older). The article also provides guidance with respect to coding procedures. Palmetto may modify the coverage article at any time, whereas revisions to the local coverage determination are subject to a public notice and comment period. However, under The Protecting Access to Medicare Act of 2014, or PAMA, which was enacted on April 1, 2014, a Medicare contractor is required to follow the requirements for a local coverage determination, including notice and public comment, in order to issue a coverage policy for a clinical laboratory test. In addition, while we believe Medicare Advantage plans should cover the Corus CAD test in accordance with the local coverage determination and the related coverage article, Medicare Advantage plans might not view the specific breadth of coverage specified in the coverage article (as opposed to the local coverage determination) as binding.

We perform all Corus CAD tests in our sole laboratory located in California. Under Medicare regulations, when filing Medicare claims for a laboratory test, providers must file claims to the MAC responsible for the Medicare jurisdiction where the test is performed. For example, if our laboratory in California performs the Corus CAD test on a sample from a patient from Texas, the reimbursement claim is filed with the MAC for California. As a result, Noridian's local coverage determination and local coverage article for Corus CAD apply to tests performed for qualifying Medicare beneficiaries nationwide, because these tests are performed in our California laboratory.

If third-party payers decide not to cover our diagnostic tests or if they offer inadequate payment amounts, our ability to generate revenue from Corus CAD could be limited. Payment for diagnostic tests furnished

to Medicare beneficiaries is typically made based on a fee schedule set by the Centers for Medicare & Medicaid Services, or CMS. In recent years, payments under these fee schedules have decreased and may decrease further. We believe that Corus CAD meets the definition of an Advanced Diagnostic Laboratory Test under PAMA. Beginning in 2017, PAMA requires the Medicare payment rate for each Advanced Diagnostic

Laboratory Test to be reset based on the weighted median of its private payer rates. We cannot predict whether such reset will decrease the Medicare payment rate for Corus CAD. Any third-party payer may stop or lower payment at any time, which could substantially reduce our revenue.

Medicare reimbursements currently comprise a significant portion of our revenue, and we may not be able to maintain or increase the number of our tests reimbursed by Medicare or their reimbursement levels.

Our Corus CAD test currently receives Medicare Part B coverage through a local coverage determination and a related local coverage article issued under the MolDx program. Noridian provides for reimbursement at a fixed payment amount specified by Palmetto for samples drawn for qualified Medicare patients throughout the U.S. so long as the tests are performed in our California laboratory. We believe that Corus CAD meets the definition of an Advanced Diagnostic Laboratory Test under PAMA. Beginning in 2017, PAMA requires the Medicare payment rate for each Advanced Diagnostic Laboratory Test to be reset based on the weighted median of its private payer rates. Medicare Fee-for-Service accounted for 74% and 76% of our revenue for the years ended December 31, 2012 and 2013, respectively.

We believe that as a result of Noridian's local coverage determination, Medicare Advantage patients, which are covered by commercial payers, should also be covered for Corus CAD tests on terms consistent with Noridian's conditions of coverage. Although we are pursuing agreements with Medicare Advantage payers to facilitate faster and consistent payment, as of March 31, 2014, we had agreements covering approximately 44% of the Medicare Advantage lives in the U.S. and cannot assure you that we will be successful in obtaining additional agreements. As of December 31, 2013, revenue from Medicare Advantage plans has not been significant.

We may not be able to maintain or increase the number of our tests reimbursed by Medicare or by Medicare Advantage programs or their reimbursement amounts for a variety of reasons, including:

- the recent change in our regional MAC from Palmetto to Noridian may result in a change in reimbursement practices for Medicare claims submitted by us or others;
- the setting of Medicare payment rates based on commercial payment rates beginning in 2017 could result in a reduction of payment rates;
- any policy level review of our test by CMS could result in a reduction or denial of coverage for our test for all Medicare patients on a nationwide basis;
-

the assignment of a specific billing code to our test by CMS may result in periodic reductions in the per test amount reimbursed for our tests by Medicare as well as other third-party payers; and

- payment amounts under the current general billing code used for our test may in the future increase or decrease for various reasons, including changes to Medicare's fee schedule, as well as geographic adjustments.

Medicare or other third-party payers that provide reimbursement for our tests may suspend, revoke or discontinue coverage at any time, or may reduce the reimbursement rates payable to us. A negative coverage determination by CMS or by MACs or any reductions in reimbursement rates could substantially impact our business. Currently, patients in the Medicare Fee-for-Service program do not have co-insurance or co-payments for clinical laboratory testing. On several occasions, Congress has considered imposing a 20% co-insurance amount for clinical laboratory services, which would require patients to pay a portion of the cost of their clinical laboratory testing. Medicare Advantage plans may require co-insurance or co-payments from patients for their clinical laboratory testing.

If we are unable to compete successfully, we may be unable to increase or sustain our revenue or achieve profitability.

Our principal competition comes from existing diagnostic methods, technologies and products used by primary care clinicians and cardiologists to diagnose patients who initially present with typical and/or atypical symptoms suggestive of coronary artery disease. These methods, technologies and products include a patient history and physical examination, exercise electrocardiogram, stress echocardiography and myocardial perfusion imaging, or MPI, ordered in the primary care office setting, and MPI, cardiac computed tomography angiography, or CCTA, and invasive coronary angiography, ordered in the cardiology office setting. Established, traditional diagnostic methods have been used for many years and are therefore difficult to change or supplement. The companies that sell products used by clinicians to diagnose patients who initially present with symptoms suggestive of obstructive CAD under traditional methods include diagnostic imaging companies such as GE Healthcare, a business unit of General Electric Company, Siemens AG and Koninklijke Philips N.V., commercial laboratories such as Laboratory Corporation of America Holdings and Quest Diagnostics Incorporated, as well as cardiac-specific testing companies.

The molecular diagnostics industry is subject to rapidly changing technology, and others may invent and commercialize technology platforms such as next-generation sequencing approaches that could compete with our test or could make our test or any test we may sell in the future obsolete. As more information regarding cardiovascular genomics becomes available to the public, we anticipate that more products aimed at identifying targeted treatment options will be developed and that these products may compete with ours. In addition, competitors may develop their own versions of our tests in countries where we have not applied for patents or where our patents have not issued and compete with us in those countries, including encouraging the use of their test by clinicians or patients in other countries.

Our Corus CAD test is considered a relatively expensive test. We have raised the list price of our test in the past and we may change the price of our test in the future. Any pricing increases could impact reimbursement of and demand for our test. Many of our present and potential competitors have widespread brand recognition and substantially greater financial and technical resources and

development, production and marketing capabilities than we do. Others may develop lower-priced, less complex tests that could be viewed by clinicians and payers as functionally equivalent to our test, which could force us to lower the list price of our test and negatively impact our operating margins and our ability to achieve profitability. In addition, if costs borne by payers for imaging modalities and invasive cardiac procedures decrease significantly, the potential costs savings to a payer from using Corus CAD may decrease. Some competitors have developed tests cleared for marketing by the FDA. There may be a marketing differentiation or perception that an FDA-cleared test is more desirable than our Corus CAD test, and that may discourage adoption and reimbursement of our tests. In addition, certain specialty clinicians may have financial incentives to order tests, or a series of tests, from our competitors, and may therefore choose not to use the Corus CAD test. If we are unable to compete successfully against current or future competitors, we may be unable to increase market acceptance for our test, which could prevent us from increasing or sustaining our revenue or achieving profitability and could cause the market price of our common stock to decline.

If our sole laboratory facility becomes inoperable, we will be unable to perform our test and our business will be harmed.

We do not have redundant clinical reference laboratory facilities outside of our Palo Alto, California laboratory facility. As discussed below, in connection with the planned move to a new facility in Redwood City in the second quarter of 2014 to replace our existing corporate headquarters, we plan to replace our existing laboratory facility. Palo Alto and Redwood City are situated near active earthquake fault lines. The facilities may be harmed or rendered inoperable by natural or manmade disasters, including earthquakes, flooding and power outages, which may render it difficult or impossible for us to perform our test for some period of time. The inability to perform our test or the backlog of tests that could develop if our current or future facility is inoperable for even a short period of time may result in the loss of customers or harm our

reputation, and we may be unable to regain those customers in the future. Although we possess insurance for damage to our property and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all. In addition, our lease agreement covering our Palo Alto, California laboratory facility is scheduled to expire in July 2014, subject to our right to extend for two years based on market rates. On October 10, 2013, we entered into a lease agreement for approximately 70,000 square feet of laboratory and office space in Redwood City, California, including space that will serve as a replacement for our corporate headquarters and our existing laboratory facilities. This lease is scheduled to expire in March 2022. We have moved some of our offices and we expect to move our laboratory and remaining offices to this Redwood City location during the second quarter of 2014. We do not plan to renew or extend our current leases for laboratory and office space in Palo Alto, California. We cannot assure you that the new facility will be ready for occupancy by the time the lease for our current laboratory facility expires.

We may not be able, or it may take considerable time, to replicate our testing processes or results in the new facility in Redwood City, California. We are required to notify our applicable regulatory and accrediting entities, the College of American Pathologists, or CAP, CMS and applicable state agencies, of the move of our laboratory facility. We do not anticipate any impact to our certification or any licensing status as a result of these notifications. However, validation of our facility move will be subject to evaluation at the time of our next on-site inspection for the purposes of both our certification under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, and our California state laboratory licensure. All regulatory and accrediting entities will continue to have the right to inspect our laboratory

facilities at any time. Our facility and the equipment we use to perform our test would be costly to replace and could require substantial lead time to repair or replace. In order to rely on a third party to perform our test, we could only use another facility with established state licensure and CLIA certification under the scope of which Corus CAD tests could be performed following validation and other required procedures. We cannot assure you that we would be able to find another CLIA-certified facility willing to comply with the required procedures, that this laboratory would be willing to perform the tests for us on commercially reasonable terms or that such laboratory would be able to meet our quality standards. In order to establish a redundant clinical reference laboratory facility, we would have to spend considerable time and money securing adequate space, constructing the facility, recruiting and training employees and establishing the additional operational and administrative infrastructure necessary to support a second facility.

We rely on single suppliers for some of our materials and may not be able to find replacements or immediately transition to alternative suppliers.

We rely on several sole suppliers for certain laboratory reagents and materials which we use to perform our tests. For example, we rely on a single supplier, PreAnalytiX, for the PaxGENE® blood collection tubes needed for our Corus CAD test. We also rely on single suppliers for signal generating- and RNA-extraction reagents. Although we are seeking to establish secondary suppliers for these materials, we may not be successful in establishing secondary suppliers on acceptable terms, if at all. Should our supply chain and procurement abilities be compromised, our ability to continuously operate would be impaired until an alternative supplier is tested and qualified, which would damage our reputation and harm our business.

If the utility of our test is not supported by reviews in peer-reviewed medical publications, the rate of adoption of our test by clinicians and the coverage and reimbursement determinations by third-party payers for our tests may be negatively affected.

Clinicians typically take a long time to adopt new products, testing practices and clinical treatments, partly because of perceived liability risks and the uncertainty of third-party reimbursement. It is critical to the success of our sales efforts that we educate a sufficient number of clinicians, clinicians and administrators about our Corus CAD test and our future tests, if any, and demonstrate the clinical benefits of these tests. It is likely that clinicians may not adopt, and third-party payers may not cover or adequately reimburse for, our tests unless they determine, based on published peer-reviewed journal articles and the experience of other

clinicians, that our tests provide accurate, reliable and cost-effective information that is useful in assessing the current likelihood of obstructive CAD.

As the healthcare reimbursement system in the U.S. evolves to place greater emphasis on comparative effectiveness and outcomes data, we cannot predict whether we will have sufficient data, or whether the data we have will be presented to the satisfaction of any payers seeking such data in the process of determining coverage for Corus CAD.

The administration of clinical and economic utility studies is expensive and demands significant attention from our management team. Data collected from these studies may not be positive or consistent with our existing data, or may not be statistically significant or compelling to the medical community. If the results

obtained from our ongoing or future studies are inconsistent with certain results obtained from our previous studies, adoption of Corus CAD would suffer and our business would be harmed.

Peer-reviewed publications regarding our tests may be limited by many factors, including delays in the completion of, poor design of, or lack of compelling data from clinical studies that would be the subject of the article. If our tests or the technology underlying our current test or future tests do not receive sufficient favorable exposure in peer-reviewed publications, the rate of clinician adoption of our test and positive reimbursement coverage decisions for our test could be negatively affected. The publication of clinical data in peer-reviewed journals is a crucial step in commercializing and obtaining reimbursement for tests such as ours, and our inability to control when, if ever, results are published may delay or limit our ability to derive sufficient revenue from any product that is the subject of a study.

Defects in our Corus CAD test could result in substantial product liabilities or professional liabilities that exceed our resources.

The marketing, sale and use of our Corus CAD test could lead to the filing of product liability claims if someone were to allege that our test failed to perform as it was designed. For example, a defect in one of our tests could lead to a false positive or false negative result, affecting the eventual diagnosis. A product liability or professional liability claim could result in substantial damages and be costly and time-consuming for us to defend. Although we maintain product and professional liability insurance, our insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims or any judgments, fines or settlement costs arising out of any such claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could cause injury to our reputation, result in the recall of our products or cause current clinical partners to terminate existing agreements and potential clinical partners to seek other partners, any of which could impact our results of operations.

If we are unable to support demand for the Corus CAD test, including successfully managing the evolution of our technology platform, our business could suffer.

As our test volume grows, we will need to continue to ramp up our testing capacity, implement increases in scale and related processing, customer service, billing and systems process improvements and expand our internal quality assurance program, technology platform to support testing on a larger scale. We will also need additional certified laboratory scientists and other scientific and technical personnel to process higher volumes of our tests. We cannot assure you that any increases in scale, related improvements and quality assurance will be successfully implemented or that appropriate personnel will be available. As additional products are developed, we may need to bring new equipment on-line, implement new systems, technology, controls and procedures and hire personnel with different qualifications.

The value of our Corus CAD test depends, in large part, on our ability to perform the tests on a timely basis and at an exceptionally high quality standard, and on our reputation for such timeliness and quality. Failure to implement necessary procedures, transition to new equipment or processes or to hire the necessary

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personnel could result in higher costs of processing or an inability to meet market demand. There can be no assurance that we will be able to perform tests on a timely basis at a level consistent with demand,

that our efforts to scale our commercial operations will not negatively affect the quality of test results or that we will be successful in responding to the growing complexity of our testing operations. If we encounter difficulty meeting market demand or quality standards for our tests, our reputation could be harmed, and our future prospects and our business could suffer.

In addition, our growth may place a significant strain on our management, operating and financial systems and our sales, marketing and administrative resources. As a result of our growth, our operating costs may escalate even faster than planned, and some of our internal systems may need to be enhanced or replaced. If we cannot effectively manage our expanding operations and our costs, we may not be able to grow effectively or we may grow at a slower pace, and our business could be adversely affected.

Security breaches, loss of data and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we and our third-party billing and collections provider collect and store sensitive data, including legally-protected health information, credit card information and personally identifiable information about our customers, payers, patients and collaboration partners. We also store sensitive intellectual property and other proprietary business information, including that of our customers, payers and collaboration partners. We manage and maintain our applications and data utilizing a combination of on-site systems, managed data center systems and cloud-based data center systems. These applications and data encompass a wide variety of business critical information, including research and development information, commercial information and business and financial information.

We face four primary risks relative to protecting this critical information: loss of access risk, inappropriate disclosure risk, inappropriate modification risk and the risk of our being unable to identify and audit our controls over the first three risks.

We are highly dependent on information technology networks and systems, including the Internet, to securely process, transmit and store this critical information. Security breaches of this infrastructure, including physical or electronic break-ins, computer viruses, attacks by hackers and similar breaches, can create system disruptions, shutdowns or unauthorized disclosure or modification of confidential information. The secure processing, storage, maintenance and transmission of this critical information is vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure, and that of our third-party billing and collections provider, may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other disruptions.

A security breach or privacy violation that leads to disclosure or modification of or prevents access to consumer information (including personally identifiable information or protected health information) could harm our reputation, compel us to comply with disparate state breach notification laws, require us to verify the correctness of database contents and otherwise subject us to liability under laws that protect personal data, resulting in increased costs or loss of revenue. If we are unable to prevent such security breaches or privacy violations or implement satisfactory remedial measures, our operations could be disrupted, and we may suffer loss of reputation, financial loss and other regulatory penalties because of lost or misappropriated information, including sensitive consumer data. In addition, these breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type described above.

Any such breach or interruption could compromise our networks or those of our third-party billing and collections provider, and the information stored there could be inaccessible or could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such interruption in access, improper access,

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disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, such as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and regulatory penalties. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to perform tests, provide test results, bill payers or patients, process claims and appeals, provide customer assistance services, conduct research and development activities, collect, process and prepare company financial information, provide information about our tests and other patient and clinician education and outreach efforts through our website, and manage the administrative aspects of our business and damage our reputation, any of which could adversely affect our business. Any such breach could also result in the compromise of our trade secrets and other proprietary information, which could adversely affect our competitive position.

In addition, the interpretation and application of consumer, health-related, privacy and data protection laws in the U.S., Europe and elsewhere are often uncertain, contradictory and in flux. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices and compliance procedures in a manner adverse to our business.

If we cannot maintain our current collaborations and enter into new collaborations in a timely manner and on acceptable terms, our efforts to commercialize Corus CAD and our development of any new products could be delayed.

We rely, and expect to continue to rely, on clinical collaborators such as medical institutions, contract laboratories, collaborative partners and other third parties to perform all of our clinical trial functions and to help us develop future products. Our reliance on these third parties reduces our control over our product development activities. If any of our collaborators were to breach or terminate its agreement with us or otherwise fail to conduct the contracted activities successfully and in a timely manner, the research, development or commercialization of the product contemplated by the collaboration could be delayed or terminated. Further, our collaborators may fail to properly maintain or defend our intellectual property rights, may infringe the intellectual property rights of third parties, may misappropriate our trade secrets or may use our proprietary information in such a way as to expose us to litigation and potential liability. Disagreements or disputes with our collaborators, including disagreements over proprietary rights or contract interpretation, might cause delays or termination of the research, development or commercialization of our products or product candidates, might lead to additional responsibilities for us with respect to product candidates or might result in litigation or arbitration, any of which would divert management attention and resources and be time-consuming and expensive. We may not be able to renew our current collaboration agreements or negotiate additional collaborations on acceptable terms, if at all, and these collaborations may not be successful. Any transition from a current clinical collaborator to a new clinical collaborator could be costly and result in significant delays in obtaining the results of the clinical trials.

From time to time, we expect to engage in discussions with potential clinical collaborators which may or may not lead to collaborations. However, we cannot guarantee that any discussions will result in clinical collaborations or that any clinical studies which may result will be enrolled or completed in a reasonable time frame or with successful outcomes. Further, once news of discussions regarding possible collaborations are known in the medical community, regardless of whether the news is accurate, failure to announce a collaboration agreement, or the entity's announcement of a collaboration with an entity other

than us, could result in adverse speculation about us, our product or our technology, resulting in harm to our reputation and our business. In addition, establishing collaborations is difficult and time consuming. Potential collaborators may elect not to work with us based on their assessment of our financial, regulatory or intellectual property position. Even if we establish new collaborations, they may not result in the successful development or commercialization of current or future products.

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We rely on courier delivery services to transport samples to our facility in a timely and cost-efficient manner. If these delivery services are disrupted, or if we are unable to obtain expedited delivery services at commercially reasonable rates, our ability to service our customers will not be possible.

Our business depends on our ability to quickly and reliably deliver test results to our customers. Blood samples are typically shipped overnight for analysis to our Palo Alto, California facility. Disruptions in delivery service, whether due to bad weather, natural disaster, terrorist acts or threats or for other reasons could adversely affect specimen integrity and our ability to process samples in a timely manner, and ultimately our reputation and our business. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our ability to achieve profitability may be adversely affected.

If we expand sales of the Corus CAD test outside of the U.S., our business will be susceptible to costs and risks associated with international operations.

As part of our longer-term growth strategy, we intend to target select international markets to grow our presence outside of the U.S. For example, we recently commenced sales of our Corus CAD test internationally, resulting in a small number of tests sold in India. Additionally, in January 2014, we entered into a marketing and sales agreement for the sale of our test in Israel. Conducting international operations subjects us to new risks that, generally, we have not faced in the U.S., including:

- uncertain or changing regulatory registration and approval processes associated with the Corus CAD test and other potential diagnostic tests;
- competition from companies located in the countries in which we offer our products, and in which we may be at a competitive disadvantage;
- longer accounts receivable payment cycles and difficulties in collecting accounts receivable;
- difficulties in managing and staffing international operations and assuring compliance with foreign corrupt practices laws;
- potentially adverse tax consequences, including the complexities of foreign value added tax systems, tax inefficiencies related to our corporate structure and restrictions on the repatriation of earnings;
-

increased financial accounting and reporting burdens and complexities;

- the imposition of trade barriers such as tariffs, quotas, preferential bidding or import or export licensing requirements;
- political, social and economic instability abroad, terrorist attacks and security concerns in general;
- fluctuations in currency exchange rates; and
- reduced or varied protection for intellectual property rights in some countries.

The occurrence of any one of the above could harm our business or results of operations. Additionally, operating internationally requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required in establishing operations in other countries will produce desired levels of revenue or profitability.

Our test may perform differently in patient populations with different ethnic and racial backgrounds.

We have conducted clinical trials of our Corus CAD test only in the U.S. without a particular focus on specific ethnic and racial backgrounds. Therefore, although to date we have not seen differences in the limited data we have on particular ethnicities, it is possible that our test may have varying performance in

patient populations with different ethnic and racial backgrounds, and thereby may affect our ability to market and sell our test in such patient populations.

If we are not able to retain and recruit qualified management, sales and marketing and research and development personnel, we may be unable to successfully execute our business strategy.

Our future success depends to a significant extent on the skills, experience and efforts of our senior management team, including: David Levison, our President and Chief Executive Officer; Mark Monane, our Chief Medical Officer; and Deborah L. Kilpatrick, our Chief Commercial Officer. The loss of any or all of these individuals, or other management personnel, could harm our business and might significantly delay or prevent the achievement of our business objectives. We have entered into an employment agreement or offer letter with each of these individuals and with our other executives. The existence of an employment agreement or offer letter does not, however, guarantee retention of these employees, and we may not be able to retain those individuals for the duration of or beyond the end of their respective terms. We do not maintain key person life insurance on any of our management personnel. Steven Rosenberg, our Chief Scientific Officer since 2006, left the company in January 2014 and Andrew Guggenhime, our Chief Financial Officer since 2011, has informed us of his intention to leave the company in the relatively near future. Although each of Dr. Rosenberg and Mr. Guggenhime has agreed to provide consulting services to us as a part of his transition, we cannot be assured that we will find a replacement for each of Dr. Rosenberg and Mr. Guggenhime prior to the cessation of his consulting

services, and as a result, Dr. Rosenberg or Mr. Guggenhime may not be available to assist with the transition to his successor.

Recruiting and retaining qualified sales and marketing and scientific and laboratory personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms, given the competition among numerous diagnostic, medical device, pharmaceutical and biotechnology companies for similarly skilled personnel.

We may engage in acquisitions that could disrupt our business, cause dilution to our stockholders or reduce our financial resources.

In the future, we may enter into transactions to acquire other businesses, products or technologies. Because we have not made any acquisitions to date, our ability to do so successfully is unproven. If we do identify suitable candidates, we may not be able to make such acquisitions on favorable terms, or at all. Any acquisitions we make may not strengthen our competitive position, and these transactions may be viewed negatively by customers or investors. We may decide to incur debt in connection with an acquisition or issue our common stock or other securities to the stockholders of the acquired company, which would reduce the percentage ownership of our existing stockholders. We could incur losses resulting from undiscovered liabilities of the acquired business that are not covered by the indemnification we may obtain from the seller. In addition, we may not be able to successfully integrate the acquired personnel, technologies and operations into our existing business in an effective, timely and non-disruptive manner. Acquisitions may also divert management attention from day-to-day responsibilities, increase our expenses and reduce our cash available for operations and other uses. We cannot predict the number, timing or size of future acquisitions or the effect that any such transactions might have on our operating results.

Our recurring losses from operations and negative cash flows have raised substantial doubt regarding our ability to continue as a going concern.

Our recurring losses from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of, and for the year ended, December 31, 2013, describing the existence of substantial doubt about our ability to continue as a going concern. If we are not able to obtain adequate funds on acceptable terms when needed, we may be required to significantly reduce operating expenses or enter into a collaboration or other similar arrangement with

respect to our Corus CAD test, which may have a material adverse effect on our business, results of operations and financial condition. The perception of our ability to continue as a going concern may make it more difficult for us to obtain financing for the continuation of our operations and could result in the loss of confidence by investors, suppliers and employees.

We may need to raise additional capital after this offering, and if we cannot raise additional capital when needed, we may have to curtail or cease operations.

We cannot assure you that the proceeds of this offering will be sufficient to fully fund our business and growth strategy. We may need to raise additional funds through public or private equity or debt

financings, corporate collaborations or licensing arrangements to continue to fund or expand our operations.

Our actual liquidity and capital funding requirements will depend on numerous factors, including:

- our ability to achieve broader commercialization of our Corus CAD test;
- our ability to obtain more extensive coverage and reimbursement for our test;
- our ability to collect our accounts receivable;
- the costs and timing of further expansion of our sales and marketing activities and research and development activities;
- our need to further expand our clinical laboratory operations;
- our need to finance capital expenditures and general and administrative expenses; and
- the timing and results of any regulatory approvals that we are required to obtain for our test.

Additional capital, if needed, may not be available on satisfactory terms, or at all. Furthermore, any additional capital raised through the sale of equity will dilute your ownership interest in us and may have an adverse effect on the price of our common stock. In addition, the terms of the financing may adversely affect your holdings or rights. Debt financing, if available, may include restrictive covenants. To the extent that we raise additional funds through collaborations and licensing arrangements, it may be necessary to relinquish some rights to our technologies or grant licenses on terms that may not be favorable to us.

If we are not able to obtain adequate funding when needed, we may have to delay development programs or selling and marketing initiatives. In addition, we may have to work with a partner on one or more of our product or market development programs, which could lower the economic value of those programs to our company.

Our ability to use net operating losses to offset future taxable income may be subject to substantial limitations.

Under Section 382 of the Internal Revenue Code, or Section 382, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change NOLs and tax credits to reduce future taxes. We believe that we have had one or more ownership changes, as a result of which our existing NOLs are currently subject to limitation. If we undergo an ownership change in connection with or after this public offering, our ability to utilize our NOLs could be further limited by Section 382. Future changes in our stock ownership, some of which are outside of our control, could result in additional ownership changes under Section 382. We are unable to predict the future ownership and other variables considered by, and elections available pursuant to, Section 382 for determining the usability of our NOLs. We may not be able to utilize a material portion of our NOLs, even if we attain profitability.

We may experience difficulties that delay or prevent our development, introduction or marketing of new or enhanced tests.

Our success depends on our ability to effectively introduce new and competitive tests. The development of new or enhanced tests is a complex, costly and uncertain process and is becoming increasingly complex and uncertain in the U.S. Furthermore, developing new tests requires us to anticipate patients', clinicians' and payers' needs and emerging technology trends accurately. We may experience research and development, regulatory, marketing and other difficulties that could delay or prevent our introduction of new or enhanced tests. The research and development process in the healthcare industry generally takes a significant amount of time from design stage to product launch. This process is conducted in various stages, and each stage presents the risk that we will not achieve our goals. We may have to abandon a test in which we have invested substantial resources. We cannot be certain that:

- any of our tests under development will prove to be effective in clinical trials;
- we will be able to obtain, in a timely manner or at all, necessary regulatory approvals;
- the tests we develop can be provided at acceptable cost and with appropriate quality; or
- these tests, if and when approved, can be successfully marketed.

These factors and other factors beyond our control, could delay the launch of new tests. Furthermore, in order to successfully commercialize diagnostic tests that we may develop in the future, we may need to conduct lengthy, expensive clinical trials and develop dedicated sales and marketing operations to achieve market awareness and demand. Any delay in the development, approval, production, marketing or distribution of a new product or service could materially and adversely affect our competitive position, our branding and our results of operations.

Our insurance policies are expensive and protect us only from some business risks, which will leave us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. For example, we do not carry earthquake insurance. In the event of a major earthquake in our region, our business could suffer significant and uninsured damage and loss. Some of the policies we currently maintain include general liability, foreign liability, employee benefits liability, property, automobile, umbrella, workers' compensation, products liability and directors' and officers' insurance. We do not know, however, if we will be able to maintain existing insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our cash position and results of operations.

If we use hazardous materials in a manner that causes injury, we could be liable for damages.

Our activities currently require the use of hazardous chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject on an ongoing basis to federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant and could negatively affect our operating results.

Risks Related to Billing and Reimbursement

Healthcare reform measures could hinder or prevent the commercial success of Corus CAD.

The pricing and reimbursement environment may change in the future and become more challenging as a result of any of several possible regulatory developments, including policies advanced by the U.S. government, new healthcare legislation or fiscal challenges faced by government health administration authorities. Specifically, there have been a number of legislative and regulatory proposals and initiatives to

change the healthcare system in ways that could affect our ability to profitably sell any diagnostic products we may develop and commercialize. Some of these proposed and implemented reforms could result in reduced reimbursement rates for our diagnostic products from governmental agencies or other third-party payers, which would adversely affect our business strategy, operations and financial results. For example, as a result of the Patient Protection and Affordable Care Act of 2010 (as amended by the Health Care and Education Reconciliation Act of 2010), or PPACA, substantial changes could be made to the current system for paying for healthcare in the U.S., including changes made in order to extend medical benefits to those who currently lack insurance coverage. Beginning in 2013, each medical device manufacturer will have to pay an excise tax in an amount equal to 2.3% of the price for which such manufacturer sells its medical devices that are listed with the FDA. Although the FDA has contended that clinical laboratory tests that are developed and validated by a laboratory for its own use, or LDTs, such as our proprietary tests, are medical devices, none of our products are currently listed with the FDA. We cannot assure you that the tax will not be extended to services such as ours in the future. The PPACA also provides that payments under the Medicare Clinical Laboratory Fee Schedule are to receive a negative 1.75% annual adjustment through 2015. Although we have not been subject to such adjustment in the past, we cannot assure you that the claims administrators will not attempt to apply this adjustment in the future.

Among other things, PPACA creates a new system of health insurance "exchanges", designed to make health policies available to individuals and certain groups though state- or federally-administered marketplaces, beginning in 2014. In connection with such exchanges, certain "essential health benefits" are intended to be made more consistent across plans, setting basically a baseline coverage level. There is some discretion to the states (and the federal government) in the definition of "essential health benefits" and we cannot predict at this time whether the Corus CAD would fall into a benefit category deemed "essential" for coverage purposes across the plans offered in any or all or the exchanges. Failure to be covered by plans offered in the exchanges could have a materially adverse impact on our business.

Moreover, the PPACA includes payment reductions to Medicare Advantage plans from CMS. Any reductions in payment to Medicare Advantage plans could materially impact coverage and reimbursement for our Corus CAD test.

In addition to the PPACA, various healthcare reform proposals have also emerged from federal and state governments. For example, in February 2012, Congress passed the "Middle Class Tax Relief and Job Creation Act of 2012" which in part reduced the potential future cost-based increases to the Medicare Clinical Laboratory Fee Schedule by 2%.

Regardless of the impact of the PPACA on us, the government has shown significant interest in pursuing healthcare reform and reducing healthcare costs. Any government-adopted reform measures could decrease the amount of reimbursement available from governmental and other third-party payers. Additionally, annual federal budget negotiations frequently include healthcare payment reform measures impacting clinical laboratory payments. On April 1, 2013, cuts to the federal budget resulting from sequestration were implemented, requiring a 2% cut in Medicare payment for all services, including our Corus CAD test. In December 2013, Congress enacted the Bipartisan Budget Act of 2013, which extended this 2% cut from sequestration for an additional two years until 2023. Federal budgetary limitations and changes in healthcare policy, such as the creation of broad limits for diagnostic products or requirements that Medicare patients pay for portions of clinical laboratory tests or services received, could substantially diminish the sale, or inhibit the utilization, of future diagnostic tests, increase costs, divert management's attention and adversely affect our ability to generate revenue and achieve profitability. Additionally, on several occasions, Congress has considered imposing a 20% co-insurance amount for clinical laboratory services, which would require beneficiaries to pay a portion of the cost of their clinical laboratory testing. Although that requirement has not been enacted at this time, Congress could decide to impose such an obligation at some point in the future, which would make it more difficult for us to collect adequate reimbursement for, and increase use of, the Corus CAD test.

A new methodology for setting Medicare payment rates for clinical diagnostic tests, scheduled to be implemented in 2017, could reduce the Medicare payment rate for Corus CAD.

PAMA establishes a new payment methodology for clinical laboratory diagnostic tests provided to Medicare patients. Under PAMA, for an Advanced Diagnostic Laboratory Test performed in calendar year 2017 and subsequent years, CMS will set the Medicare payment for each test based on the weighted median of reported private payer payment rates for that test. We believe that Corus CAD meets the definition of an Advanced Diagnostic Laboratory Test because it is a sole source multi-analyte test with a unique algorithm yielding a single result. CMS will require clinical laboratories, including us, to begin reporting private payer rate information beginning in 2016. We cannot predict how this new payment methodology may impact Corus CAD. This new payment methodology could reduce the Medicare payment rate for the Corus CAD test. Any reduction in reimbursement could substantially impact our business.

Under PAMA, CMS must assign a unique Healthcare Common Procedure Coding System, or HCPCS, code by January 1, 2016 to each Advanced Diagnostic Laboratory Test currently paid by the Medicare program. After CMS assigns a unique HCPCS code to Corus CAD, CMS is required to make the Medicare payment rate public. We cannot predict how CMS will publicly report a payment rate for Corus CAD with this unique identifier. A public report of the payment rate for Corus CAD could adversely affect our ability to negotiate payment rates with private payers. Any reduction in reimbursement could substantially impact our business.

Changes in Medicare Administrative Contractor services could alter current Medicare coverage or payment amounts.

On a five-year rotational basis, Medicare requests bids for its regional MAC services. Palmetto covered Corus CAD since an effective date of January 1, 2012, as stated in the local coverage determination for Corus CAD. As of September 16, 2013, the MAC for California transitioned from Palmetto to Noridian. Additionally, PAMA allows CMS to designate up to four MACs to establish coverage policies and possibly process claims for payment for clinical diagnostic laboratory tests. We cannot predict whether Noridian or

any future MAC will continue to provide reimbursement for Corus CAD at the same payment amount or with the same breadth of coverage in the future, if at all. Additional changes in the MAC processing Medicare claims for Corus CAD tests could impact the coverage or payment amount for our test and our ability to obtain Medicare coverage for any products we may launch in the future.

Our Medicare Part B coverage for Corus CAD is not a formal coverage determination by CMS, and any future adverse coverage decisions by CMS could substantially reduce our revenue.

Medicare reimbursements currently comprise a significant portion of our revenue. Our current Medicare Part B reimbursement was not set pursuant to a national coverage determination by CMS. Although we believe that coverage is available under Medicare Part B even without such a determination, we currently lack the national coverage certainty afforded by a formal coverage determination by CMS. If our Medicare Part B coverage is subject to a negative coverage decision by CMS or otherwise adversely impacted, our revenue may be substantially reduced.

There is no established payment for our test under Medicare's 2014 Clinical Laboratory Fee Schedule. If one is set, the reimbursement amounts we would receive from Medicare may change, which could have a material adverse effect on our revenue.

Clinical laboratory tests are typically billed to payers using the Healthcare Common Procedure Coding System, or HCPCS. Our Corus CAD test has not been assigned a specific HCPCS code, and accordingly, there is no established payment for the test under the Clinical Laboratory Fee Schedule, or CLFS. Currently, our Medicare reimbursement for the Corus CAD test is paid under a non-specific billing code. This means that the regional MAC processing our claims determines the amount of payment for the tests we bill. (Noridian reimburses us for the Corus CAD test at the fixed payment amount specified by Palmetto.) As a result, even when coverage and payment amounts are in place for the Corus CAD test, they are still subject

to payer review and payments may be adjusted in a way that impacts our revenue, cash flow and profitability. Without a specific HCPCS code for our Corus CAD test, there can be no assurance that an adequate payment amount will continue to be assigned to the Corus CAD test.

Under PAMA, CMS must assign a unique HCPCS code by January 1, 2016 to any existing test that qualifies as an Advanced Diagnostic Laboratory Test and is paid by Medicare as of April 1, 2014 without a unique HCPCS code. We believe that CMS must assign a unique code to Corus CAD because it meets the definition of an Advanced Diagnostic Laboratory Test and it is currently paid for by the Medicare program without a unique HCPCS code. We cannot predict what type of code CMS will assign to Corus CAD. The assignment in the future of a specific HCPCS code to our test could cause Medicare, as well as other payers that use the HCPCS classification system, to revisit their decision to provide coverage of Corus CAD, and could adversely affect the rate at which payers reimburse for our test or result in adverse coverage determinations from our payers. The American Medical Association, or AMA, maintains and holds the copyright to a type of HCPCS codes called Current Procedural Terminology, or CPT, codes. In January 2012, the AMA established certain CPT codes, called Multianalyte Assays with Algorithmic Analyses codes, or MAAA codes. The Corus CAD test is considered a multi-analyte test with an algorithm but does not have a MAAA CPT code. There are two types of MAAA CPT codes: a Category I MAAA code and a Category III code, or Administrative MAAA code. Typically, payers will automatically deny tests billed with any type of Administrative MAAA code. Conversely, tests billed with Category I MAAA codes are generally not subject to manual review and unexpected payment adjustment.

We may in the future apply for a unique MAAA CPT code for our Corus CAD test, which would likely take one or more years to be considered and, if granted, could result in a change in our reimbursed amount from Medicare or private payers. For example, in December 2013, CMS released the final payment determinations for the CLFS for 2014. CMS recognized certain MAAA CPT codes as valid for Medicare purposes at the discretion of the Medicare contractors. CMS indicated that the agency will consider each individual test that receives a MAAA CPT code on its own merits. If Corus CAD is assigned a MAAA CPT code in the future, a determination by a Medicare contractor to not pay for Corus CAD's MAAA CPT code could be harmful to our business, and could have negative spillover implications that prevent or limit coverage by other third-party payers that might mirror aspects of Medicare payment criteria. We cannot predict whether the classification of the Corus CAD test under a MAAA CPT code subject to the fee schedule would result in a lower payment amount.

In February 2013, the AMA and McKesson Corporation, or McKesson, announced a collaboration to link CPT codes with McKesson's Z-Code test identifiers in an effort to clarify laboratory test reporting for government and commercial payers. At this time, the process McKesson and the AMA will use to link Z-Codes to CPT codes is unknown. In January 2012, we received a McKesson Z-Code for Corus CAD. If the current McKesson Z-Code for Corus CAD does not get mapped to the unlisted code with which we are billing but instead is linked to another CPT with a different, possibly lower, payment amount, the Corus CAD test would then likely be paid at a rate different from what we receive currently, and our business could be harmed.

Billing complexities associated with obtaining payment or reimbursement for our tests may negatively affect our revenue, cash flow and profitability.

Billing for clinical laboratory testing services is complex. In cases where we do not have a contract in place requiring the payment of a fixed fee per test, we perform tests in advance of payment and without certainty as to the outcome of the billing process. In cases where we do receive a fixed fee per test, we may still have disputes over pricing and billing. We receive payment from individual patients and from a variety of payers, such as commercial insurance carriers and governmental programs, primarily Medicare. Each payer typically has different billing requirements. Among the factors complicating our billing of third-party payers are:

- disputes among payers regarding which party is responsible for payment;

- disparity in coverage among various payers;
- different process, information and billing requirements among payers; and
- incorrect or missing billing information, which is required to be provided by the prescribing clinician.

Additionally, from time to time, payers change processes that may affect timely payment. These changes may result in uneven cash flow or impact the timing of revenue recognized with these payers. With respect to payments received from governmental programs, factors such as a prolonged government

shutdown could cause significant regulatory delays or could result in attempts to reduce payments made to us by federal government healthcare programs. These billing complexities, and the related uncertainty in obtaining payment for Corus CAD, could negatively affect our revenue, cash flow and profitability.

Our failure or the failure of third party payers or clinicians to implement the ICD-10 code sets in a timely manner could negatively impact our reimbursement, our cash flow or the turnaround time for our test results.

Currently, the codes used by clinicians to report medical diagnoses, the International Classification of Diseases, Ninth Revision, or ICD-9, code sets, are used by payers such as Medicare to allow for reimbursement under their coverage policies. CMS previously announced that the ICD-9 code set will be replaced by International Statistical Classification of Diseases and Related Health Problems, 10th revision, or ICD-10, code sets on October 1, 2014. PAMA delays CMS from implementing the transition to ICD-10 code sets before October 1, 2015. While we do not believe that this transition to ICD-10 will change the scope of our existing coverage policies, we have initiated a dialogue with Palmetto to confirm that the existing ICD-9 diagnosis codes in the coding and billing guidelines established by Palmetto for the Corus CAD test will be transitioned to the corresponding ICD-10 codes. If Palmetto fails to map the current ICD-9 codes to the ICD-10 codes by the compliance deadline, our ability to obtain payment for some tests could be adversely affected.

We will also be required to update our internal reporting systems with the ICD-10 code sets, including modifying our software programs that determine whether the codes submitted are within our intended use and payer guidelines. If we are unable to update our internal software systems by the compliance deadline, we may experience delays in processing our Corus CAD test results or face challenges in our ability to receive payments for our test.

Further, reimbursement for our test will require clinicians and health care providers to utilize the ICD-10 code sets. The failure of clinicians and health care providers to submit claims using appropriate ICD-10 codes could impact our ability to process some tests or cause a delay in our turnaround time. As a result, our test volume could be adversely impacted. Lastly, because the transition to the ICD-10 code sets will affect many clinicians, payers and healthcare providers, it is possible that the Medicare contractors we work with may experience administrative difficulties or delays as a result of the transition, which could negatively impact our ability to be timely reimbursed for Corus CAD tests.

Risks Related to our Intellectual Property

We do not currently have any issued patents covering Corus CAD and the U.S. Patent and Trademark Office issued a final rejection of our Corus CAD application claims that we are currently responding to by way of a request for continued examination of the application and amendment to the application's claims. We also received a final rejection of another U.S. patent application related to the diagnosis of CAD with claims directed to a different set of markers from those used in our Corus CAD test. We may be unable to obtain, maintain and enforce the patent and other intellectual property rights necessary to protect our technologies and tests. If our intellectual property rights are unable to protect our technologies and tests, it may materially and adversely affect our business.

Our commercial success will depend on our ability to obtain patent protection and adequately protect the intellectual property rights covering our technologies and tests in the U.S. and other countries. To date, we

do not own or otherwise control rights to any issued patents that cover our products, product candidates or proprietary technology. As of March 31, 2014, our patent estate included 34 published patent applications pending in the U.S. and various foreign jurisdictions, two allowed cases (one in the European Patent Office and the other in Israel), and two unpublished provisional applications and one unpublished utility application, each pending in the U.S. We cannot predict how long it will take for such patent applications to result in issued patents, and there is no guarantee that any of our patent applications will result in issued patents or that any issued patents will include claims that are sufficiently broad to cover our technologies or tests or to provide meaningful protection from our competitors. Our U.S. patent application with claims directed to the Corus CAD test received a final rejection from the U.S. Patent and Trademark Office, or USPTO. We requested continued examination of this application and amended the application to attempt to address the examiner's outstanding objections; however, there is no guarantee that this application will ultimately issue as a patent. On January 16, 2014, we filed a continuation of this application with claims directed to the Corus CAD test algorithm, and requested prioritized examination. We also received a final rejection of another U.S. patent application related to the diagnosis of CAD with claims directed to a different set of markers from those used in the Corus CAD test. We are amending these claims to attempt to overcome the claim rejections and intend to file a timely request for continued examination. There is no guarantee that this application will ultimately issue as a patent. We may also fail to take the necessary actions to maintain any patents that may issue. We will be able to protect our existing and future technologies and tests only to the extent that they are covered by valid and enforceable patents or utilize technologies or know-how that are effectively maintained as trade secrets. If third parties disclose or misappropriate our trade secrets, it may materially and adversely impact our business. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us and we may incur substantial litigation costs in connection with our attempts to recover damages or restrict third-party use of our intellectual property.

We apply for patents covering our technologies and tests as we deem appropriate. However, we may fail to apply for patents on important technologies or tests in a timely fashion, or at all. In addition, we may not pursue or obtain patent protection in all major markets. Any future patents we may obtain may not be sufficiently broad to prevent others from using our technologies or from developing and commercializing competing products and technologies. Moreover, the patent positions of biotechnology and pharmaceutical companies are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights cannot be predicted with certainty. In addition, we cannot guarantee you that:

- we were the first to make the inventions covered by each of our pending patent applications;
- we were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies by inventing around the claims of our patent applications and any future patents we may obtain;
- a third party will not challenge our patents or those of our collaboration partners or, if such patents are challenged, that a court will hold that such patents are valid and enforceable;
- our pending patent applications will result in issued patents or that any patents issued to us or our collaboration partners will cover our product as ultimately developed, or provide us with any competitive advantages;

- we will develop additional proprietary technologies that are patentable; or
- the patents of others will not have an adverse effect on our business.

In addition, changes in either the patent laws or interpretation of the patent laws in the U.S. and other countries may diminish the value of our patent rights or narrow the scope of our patent protection.

There are numerous recent changes to the patent laws and proposed changes to the rules of the USPTO, which may have a significant impact on our ability to protect our technology and enforce our intellectual

property rights. For example, on September 16, 2011, President Obama signed the Leahy-Smith America Invents Act, which codifies several significant changes to the U.S. patent laws, including, among other things, changing from a "first to invent" to a "first inventor to file" system, limiting where a patentee may file a patent suit, requiring the apportionment of patent damages, replacing interference proceedings with derivation actions and creating a post-grant opposition process to challenge patents after they have issued. The effects of these changes are currently uncertain as many of the changes, including the transition to a "first inventor to file" system only became effective as of March 16, 2013, and the courts and the USPTO are just starting to address these provisions in the context of a dispute. Further, we have not assessed the applicability of the act and new regulations on the specific patent applications discussed herein.

Furthermore, the patent positions of companies engaged in the development and commercialization of diagnostic tests are particularly uncertain. The U.S. Supreme Court issued a decision on March 20, 2012, in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, holding that several claims related to measuring drug metabolite levels from patient samples were not patentable subject matter. The decision appears to impact the patent eligibility of diagnostics patent claims that merely apply a law of nature via a series of routine steps. We believe our technology is differentiated from that at issue in the above case as we measure multiple markers and apply a complex algorithm to obtain our results, but the full impact of the decision is not yet known and it has created uncertainty around the patentability of certain biomarker claims. The claims of our diagnostic patent applications may therefore fail to issue, or if they do issue, may subsequently be challenged or invalidated, on the grounds that they include subject matter that is not patent eligible based on the Supreme Court's ruling in this case and the further evolution of case law in this area.

To the extent that our intellectual property, including licensed intellectual property, offers inadequate protection or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition and our competitive position and business could be adversely affected.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, defending and enforcing patents on all of our technologies and tests throughout the world would be prohibitively expensive. As a result, we seek to protect our proprietary position by filing patent applications in the U.S. and in select foreign jurisdictions and cannot guarantee that we will obtain the patent protection necessary to protect our competitive position in all major markets. Competitors may use our technologies or tests in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export infringing products to territories where we have patent

protection but where enforcement is not as strong as that in the U.S. These products may compete with our current and future products in jurisdictions where we do not have any issued patents, and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or the marketing of competing products in violation of our proprietary rights generally. The legal systems of certain countries make it difficult or impossible to obtain patent protection for diagnostic tests. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and could divert our efforts and attention from other aspects of our business.

If we infringe, or are alleged to infringe, intellectual property rights of third parties, our business could be harmed.

Substantial litigation over intellectual property rights exists in the professional and consumer diagnostics industries and in the health information solutions marketplace. Our research, development and commercialization activities, including our current proprietary tests, as well as any other diagnostic test resulting from these activities, may infringe or be claimed to infringe patents or other intellectual property

rights owned by other parties. Certain of our competitors and other companies in the industry have substantial patent portfolios, and may attempt to use patent litigation as a means to obtain a competitive advantage. As we currently have no issued patents, and only two allowed patents, both outside the U.S., we may be a target for such litigation, as we would not be able to assert patent infringement counterclaims against parties that sue us for infringement. Even if our remaining pending patent applications issue, they may not relate to our competitors' activities and may therefore not deter litigation against us. The risks of being involved in such litigation may also increase as we gain greater visibility as a public company and as we gain commercial acceptance of our products and move into new markets and applications for our products. There may also be patents and patent applications that are relevant to our technologies or tests that we are not aware of. For example, certain relevant patent applications may have been filed but not published. If such patents exist, or if a patent issues on any of such patent applications, that patent could be asserted against us. These third parties could bring claims against us that would cause us to incur substantial expenses and, if the claims against us are successful, could cause us to pay substantial damages. The defense of such a suit could also divert the attention of our management and technical personnel. Further, if an intellectual property infringement suit were brought against us, we could be forced to stop or delay research, development or sales of the product or product candidate that is the subject of the suit.

As a result of infringement claims, or in order to avoid potential claims, we may choose or be compelled to seek intellectual property licenses from third parties. These licenses may not be available on acceptable terms, or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us likely would be nonexclusive, which would mean that our competitors also could obtain licenses to the same intellectual property. Ultimately, we could be prevented from commercializing a product or be forced to cease some aspect of our business operations if, as a result of actual or threatened infringement claims, we are unable to enter into licenses of the relevant intellectual property on acceptable terms. Further, if we attempt to develop or develop alternative

methods or products in response to infringement claims or to avoid potential claims, we could encounter delays in product introductions or interruptions in product sales.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the medical diagnostics industry. In addition to the possibility of litigation relating to infringement claims asserted against us, we may become a party to other patent litigation and other proceedings, including interference, derivation or re-examination proceedings declared by the USPTO and similar proceedings in foreign countries, regarding intellectual property rights with respect to our current or future technologies or tests. The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Patent litigation and other proceedings may also absorb significant management time. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive and time-consuming.

Competitors may infringe or otherwise violate our intellectual property, including our patents. As a result, we may be required to file claims in an effort to stop third-party infringement or unauthorized use. Any such claims could provoke these parties to assert counterclaims against us, including claims alleging that we infringe their patents or other intellectual property rights. This can be expensive, particularly for a company of our size, and time-consuming, and even if we are successful, any award of monetary damages or other remedy we may receive may not be commercially valuable. In addition, in an infringement proceeding, a court may decide that our asserted intellectual property is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our intellectual property does not cover its technology. An adverse determination in any litigation or defense proceedings could put our intellectual property at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

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If the breadth or strength of our patent or other intellectual property rights is compromised or threatened, it could allow third parties to commercialize our technology and tests or result in our inability to commercialize our technology and tests without infringing third-party intellectual property rights. Further, third parties may be dissuaded from collaborating with us.

Interference or derivation proceedings brought by the USPTO or its foreign counterparts may be necessary to determine the priority of inventions with respect to our patent applications, and we may also become involved in other proceedings, such as re-examination proceedings, before the USPTO or its foreign counterparts. Any such litigation, submission or proceeding may be resolved adversely to us and, even if successful, may result in substantial costs and distraction to our management.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. Moreover, intellectual property law relating to the fields in which we operate is still evolving and, consequently, patent and other intellectual property positions in our industry are subject to change and are often uncertain. We may not prevail in any of these suits or other efforts to protect our technology, and the damages or other remedies awarded, if any, may not be commercially valuable. During the course of this type of litigation, there could be public announcements of

the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, the market price for our common stock could be significantly harmed.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for some of our technologies and tests, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants that obligate them to assign to us any inventions developed in the course of their work for us. However, we cannot guarantee that we have executed these agreements with each party that may have or have had access to our trade secrets or that the agreements we have executed will provide adequate protection. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Monitoring unauthorized disclosure is difficult and we do not know whether the procedures we have followed to prevent such disclosure are, or will be adequate. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the U.S. may be less willing or unwilling to protect trade secrets. If any of the technology or information that we protect as trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to, or independently developed by, a competitor, our competitive position would be harmed.

If our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest, and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to be infringing on other marks. As a means to enforce our trademark rights and prevent infringement, we may be required to file trademark claims against third parties or initiate trademark opposition proceedings. This can be expensive, particularly for a company of our size, and time-consuming. In addition, in an infringement proceeding, a court may decide that a trademark of ours is not valid or is unenforceable, or may refuse to stop the other party from using the trademark at issue. We

may not be able to protect our rights to these and other trademarks and trade names which we need to build name recognition by potential partners or customers in our markets of interest. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected.

Our business is dependent on licenses from third parties.

We license from third parties technology necessary to develop and commercialize our products. Our business is dependent on this licensed technology, which includes, among other licenses, a non-exclusive royalty bearing license from Roche Molecular Diagnostics Systems, Inc., that covers methods for detecting and measuring target nucleic acids through certain polymerase chain reaction nucleic acid amplification processes, and a worldwide non-exclusive royalty-bearing license from XDx, Inc. that covers the use of certain data and materials relating to clinical samples as well as the commercial distribution of products based upon the development and use of such XDx, Inc. intellectual property. We also recently entered into a fully-paid, non-exclusive license with Wescor, Inc., that covers certain technology known as the minor groove binder technology, including probes and primers incorporating the technology for use in human in-vitro diagnostics. Our rights to use these and other licensed technologies, data and materials and to employ the inventions claimed in licensed patents are subject to the continuation of and our compliance with the terms of the applicable licenses. We are obligated under these licenses to, among other things, pay certain royalties upon commercial sales of our products. These licenses generally last until the expiration of the last to expire of the patents included within the licenses that cover our use within our products, but the licenses may be terminated earlier in certain circumstances. Termination of any of these licenses could prevent us from producing or selling some or all of our products, and a failure of the licensors to abide by the terms of the licenses or to prevent infringement by third parties could harm our business and negatively impact our market position. Failure of a licensor to abide by the terms of a license or to prevent infringement by third parties could also harm our business and negatively impact our market position.

We may be subject to claims by third parties that we or our employees have wrongfully used or disclosed alleged trade secrets or misappropriated intellectual property, or claiming ownership of what we view as our own intellectual property.

As is commonplace in our industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information of others in the course of their work for us and no claims against us are currently pending, we may be subject to claims that these employees have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. We may also be forced to bring claims against third parties or defend against third-party claims in order to determine the ownership of our intellectual property. An adverse result in the prosecution or defense of any such claims could require us to pay substantial monetary damages and could result in the loss of valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against these claims, litigation could result in substantial costs and be a distraction to management.

Risks Related to Government Regulation

Our business is subject to complex and sometimes unpredictable government regulations. If we fail to comply with these regulations, we could incur significant fines and penalties.

As a provider of clinical laboratory testing services, we are subject to extensive and frequently changing federal, state and local laws and regulations governing various aspects of our business. In particular, the clinical laboratory industry is subject to significant governmental certification and licensing regulations, as well as federal and state laws regarding:

- test ordering and billing practices;

- marketing, sales and pricing practices;
- insurance;
- anti-markup legislation;
- health information privacy and security; and
- consumer protection and unfair trade practices.

In addition, advertising of our tests may become subject to FDA regulation and also regulation by the Federal Trade Commission, or FTC, under the Federal Trade Commission Act, or FTC Act. Most states also have similar postmarket regulatory and enforcement authority. Additionally, most foreign countries have analogous authorities, regulations and required approvals. We are unable to predict what additional federal or state legislation or regulatory initiatives may be enacted in the future regarding our business or the healthcare industry in general, or what effect such legislation or regulations may have on us. Federal or state governments may impose additional restrictions or adopt interpretations of existing laws that could have a material adverse effect on us.

We incur significant costs in complying with these laws and regulations, and we may not be able to obtain all required approvals on a timely basis, which could result in delays in our ability to market or sell our products. Violation of any existing or future laws, regulations, restrictions or interpretations could result in enforcement actions, such as seizures, injunctions, civil penalties and criminal prosecutions, or in suspension or revocation of certifications or licenses that are required to operate our business, or in injunctions and other associated remedies, any of which could have a material adverse effect on our business.

Failure to comply with CLIA and state laws governing clinical laboratories would negatively affect our business, and we may be required to expend significant amounts of resources to comply with these requirements.

We are subject to CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA, which is administered by CMS, is intended to ensure the quality and reliability of clinical laboratories in the U.S. by mandating specific standards in the areas of personnel qualifications, administration, participation in proficiency testing, patient test management, quality control, quality assurance and inspections. The failure to comply with CLIA requirements can result in enforcement action, including the revocation, suspension, or limitation of our CLIA certificate, as well as a directed plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit or criminal penalties. We must maintain CLIA compliance and certification to be eligible to bill for tests provided to Medicare beneficiaries. If we were to be found out of compliance with CLIA program requirements and subjected to sanctions, our business and reputation could be harmed. Even if it were possible for us to bring our laboratory back into compliance, we could incur significant expenses and potentially lose revenue in doing so.

We are also required to maintain a license to conduct testing in California. California laws establish standards for day-to-day operation of our clinical laboratory, including the training and skills required of personnel and quality control. Several states require that we hold licenses to test specimens from patients

residing in those states, and we currently hold licenses in all these states. Other states have similar requirements or may adopt similar requirements in the future. Finally, we may be subject to regulation in foreign jurisdictions if we seek to expand international distribution of our test. If we are not in compliance with a particular state's or foreign jurisdiction's licensing requirements, we may be unable to accept test specimens from patients residing in that state or foreign jurisdiction, as applicable, which could adversely affect our business.

Our current laboratory is certified under CLIA to perform testing and is accredited by CAP. To renew our CLIA certificate, we are subject to survey and inspection every two years to assess compliance with program standards. Moreover, CLIA inspectors may make random inspections of our laboratory. In connection with our planned move to a new facility in the second quarter of 2014 to replace our existing corporate headquarters, including our laboratory space, we are required to notify our applicable regulatory and accrediting entities, including CAP, CMS and applicable state agencies, of the move of our laboratory facility. We do not anticipate any impact to our certification or any licensing status as a result of these notifications. However, validation of our facility move will be subject to evaluation at the time of our next on-site inspection for the purposes of both our CLIA certification and our California state laboratory licensure. All regulatory and accrediting entities will continue to have the right to inspect our laboratory facilities at any time.

The standards applicable to the testing which we perform may change over time. New interpretations of current regulations or future changes in regulations under CLIA or other governmental regulatory bodies may make it difficult or impossible for us to comply with CLIA and other applicable regulations, which would significantly harm our business. We cannot assure you that we will be able to operate profitably should regulatory compliance requirements become substantially more costly in the future.

If we fail to comply with federal and state healthcare laws, including fraud and abuse, physician self-referral and health information privacy and security laws, we could face substantial penalties and our business, results of operations, financial condition and prospects could be adversely affected.

In addition to CLIA regulation and state laws governing clinical laboratories, we are subject to other areas of regulation by both the federal and state government that may affect our ability to conduct business, including, without limitation:

- the federal Anti-Kickback Statute, which constrains our marketing practices, educational programs, pricing policies, and relationships with healthcare providers or other entities, by prohibiting, among other things, soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce or reward, or in return for, either the referral of an individual or the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid or other third-party payers that are false or fraudulent;

- federal criminal statutes, created by HIPAA, that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information;
- the federal physician self-referral law, commonly known as the Stark Law, which prohibits a physician from making a referral to an entity for certain designated health services reimbursed by Medicare or Medicaid if the physician (or a member of the physician's family) has a financial relationship with the entity, and which also prohibits the submission of any claims for reimbursement for designated health services furnished pursuant to a prohibited referral; and
- state and foreign law equivalents of each of the above federal laws, such as anti-kickback, false claims, and self-referral laws, which may apply to items or services reimbursed by any third-party payer, including commercial insurers, and state and foreign laws governing the privacy and

security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including significant criminal and civil monetary penalties, damages, fines, imprisonment, exclusion from participation in government programs, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private "qui tam" actions brought by individual whistleblowers in the name of the government, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

The Corus CAD test is subject to the FDA's exercise of enforcement discretion, and any changes to the FDA's policies with respect to this exercise of enforcement discretion could negatively affect our business.

Clinical laboratory tests that are developed and validated by a laboratory for its own use are called laboratory-developed tests, or LDTs. The laws and regulations governing the marketing of diagnostic products for use as LDTs are extremely complex, and in many instances, there are no significant regulatory or judicial interpretations of these laws. For instance, while the FDA maintains that LDTs are subject to the FDA's authority as diagnostic medical devices under the Federal Food, Drug and Cosmetic

Act, or FDCA, the FDA has generally exercised enforcement discretion with respect to most LDTs performed by CLIA-certified laboratories.

All of the clinical results that we report as part of our proprietary tests are LDTs. We have not yet applied for, or obtained, FDA clearance or premarket approval for any of these tests. However, should the FDA change its current policy of enforcement discretion, we may be required to seek FDA clearance or premarket approval for LDTs in the future.

The regulation of diagnostic tests classified as LDTs may become more stringent in the future. Beginning in January 2006, the FDA began publicly indicating its opinion that LDTs such as ours were subject to FDA regulation as devices and issued a series of guidance documents intending to establish a framework by which to regulate certain laboratory tests including LDTs such as ours. The FDA held a meeting in July 2010 during which it indicated that it intends to reconsider its current policy of enforcement discretion and to begin drafting an oversight framework for LDTs. In October 2012, the FDA published a list of planned guidance documents that would be the focus of the agency in its fiscal year 2013, including the finalization of previously issued draft guidance which could include guidance documents addressing FDA regulation of LDTs such as ours. As recently as December 2013, a senior agency official publicly reiterated the FDA's continued interest in such regulation. To date, the FDA has not issued any of these planned guidance documents. We cannot predict the extent of the FDA's future regulation and policies with respect to LDTs, and there can be no assurance that the FDA will not require us to obtain premarket clearance or approval for some or all portions of our proprietary tests. If the FDA makes significant changes to the regulation of LDTs, or if Congress were to pass legislation that more actively regulates LDTs and in vitro diagnostic tests, it could restrict our ability to provide our test, be reimbursed for our test or delay the launch of future tests. We could also be required to conduct additional clinical trials, submit a pre-market clearance notice or a pre-market approval application with the FDA or limit the labeling claims for our tests. If our Corus CAD test becomes listed with the FDA, it may also become subject to additional provisions of the PPACA such as the medical device tax.

While we believe that we are currently in material compliance with applicable laws and regulations relating to LDTs, we cannot assure you that the FDA or other regulatory agencies would agree with our determination. A determination that we have violated these laws, or a public announcement that we are being investigated for possible violation of these laws, could hurt our business and our reputation. A significant change in any of these laws, or the FDA's interpretation of the scope of its enforcement discretion, may require us to change our business model in order to maintain compliance with these laws.

In June 2011, the FDA issued draft guidance regarding "Commercially Distributed In Vitro Diagnostic Products Labeled for Research Use Only or Investigational Use Only." In addition, during 2011, the FDA also issued other draft guidance documents which may impact our tests or our future tests, including draft guidance regarding Mobile Medical Applications which is directed at patient management tools. Neither of these guidance documents has been finalized. We cannot predict the ultimate timing or form of any such guidance or regulation or the potential impact on our existing tests, our tests in development or the materials used to perform our tests.

While we qualify all materials used in our tests according to CLIA regulations, we cannot be certain that the FDA will not enact rules or issue guidance documents which could impact our ability to purchase materials necessary for the performance of our tests. Should any of the reagents obtained by us from suppliers and used in conducting our tests be affected by future regulatory actions, our business could be

adversely affected by those actions, including by an increase in the cost of testing or delays, limitations or prohibitions on the purchase of reagents necessary to perform testing.

Our financial condition and results of operations may be adversely affected by international government regulatory and business risks.

We currently derive a small portion of our revenue from India. In the future, we may derive a portion of our revenue from other countries outside the U.S., such as Israel.

Our international operations subject us to varied and complex domestic, foreign and international laws and regulations. Compliance with these laws and regulations often involves significant costs or requires changes in our business practices that may reduce revenue and profitability.

We may be subject to the regulatory approval requirements for each foreign country in which we sell our tests. Our future performance depends on, among other matters, the timely receipt of necessary regulatory approvals for our tests. Regulatory approval can be a lengthy, expensive and uncertain process. In addition, regulatory processes are subject to change, and new or changed regulations can result in increased costs and unanticipated delays. Any changes in foreign approval requirements and processes may cause us to incur additional costs or lengthen review times of our tests. We may not be able to obtain foreign regulatory approvals on a timely basis, if at all, and any failure to do so may cause us to incur additional costs or prevent us from marketing our tests in foreign countries, which may have a material adverse effect on our business, financial condition and results of operations.

We could incur additional legal compliance costs associated with our global operations and could become subject to legal penalties if we do not comply with certain regulations. For example, we are subject to the U.S. Foreign Corrupt Practices Act which, among other restrictions, prohibits U.S. companies and their intermediaries from making payments to foreign officials for the purpose of obtaining or retaining business or otherwise obtaining favorable treatment, as well as anti-bribery and anti-corruption laws of other jurisdictions. In addition, our international activities are subject to compliance with U.S. economic and trade sanctions, which restrict or otherwise limit our ability to do business in certain designated countries. Our training and compliance program and our other internal control policies and procedures may not always protect us from acts committed by our employees or agents.

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Any test for which we obtain regulatory clearance will be subject to extensive ongoing regulatory requirements, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products.

Any test for which we obtain regulatory clearance, including our Corus CAD test, along with the manufacturing processes, labeling, advertising and promotional activities for such test or device, will be subject to continual requirements of, and review by, CLIA, possibly the FDA and comparable regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, requirements relating to quality control, quality assurance and corresponding maintenance of records and documents, requirements relating to product labeling, advertising and promotion and recordkeeping. Regulatory clearance of a test or device may be subject to limitations by the regulatory body as to the indicated uses for which the product may be marketed or to other conditions of approval. In addition, approval may contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the test or device. After clearance, discovery

of previously-unknown problems with our tests, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in actions such as:

- restrictions on operations of our laboratory;
- restrictions on manufacturing processes;
- restrictions on marketing of a test;
- warning letters;
- withdrawal of the test from the market;
- refusal to approve applications or supplements to approved applications that we may submit;
- fines, restitution or disgorgement of profits or revenue;
- suspension, limitation or withdrawal of regulatory clearances;
- exclusion from participation in U.S. federal or state healthcare programs, such as Medicare and Medicaid;
- refusal to permit the import or export of our products;
- product seizure;
- injunctions; or
- imposition of civil or criminal penalties.

Risks Related to this Offering and Our Common Stock

An active trading market for our common stock may not develop.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock will be determined through negotiations with the underwriters and may bear no relationship to the price at which the common stock will trade upon completion of this offering. Entities affiliated with certain of our existing stockholders and directors have indicated an interest in purchasing up to an aggregate of in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these potential investors and any of these potential investors could determine to purchase more, less or no shares in this offering. Such purchases will reduce the available public float for our shares because these stockholders will be restricted from selling the shares by restrictions under applicable securities laws and the lock-up agreements described in the "Shares Eligible for Future Sale" and "Underwriting" sections of this

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prospectus. As a result, the liquidity of our common stock could be significantly reduced from what it would have been if these shares had been purchased by investors that were not affiliated with us. Although we expect our common stock will be approved for listing on The NASDAQ Global Market, or NASDAQ, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock does not develop, it may be difficult for you to sell the shares you purchase in this offering without depressing the market price for the common stock or to sell your shares at all.

The trading price of our common stock is likely to be volatile, and purchasers of our common stock could incur substantial losses.

Our stock price is likely to be volatile. The stock market in general and the market for diagnostic companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including:

- demand by clinicians and patients for our current and future tests, if any;
- coverage and reimbursement decisions by third-party payers and announcements of those decisions;
- clinical trial results and publication of results in peer-reviewed journals or presentation of results at medical conferences;
- new or less expensive tests and services or new technology introduced or offered by our competitors or us;
- changes in the regulatory environment, including any announcement from the FDA regarding its decisions in regulating our activities;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- announcements by us of significant acquisitions, licenses, strategic partnerships, joint ventures or capital commitments;
- market conditions in the diagnostic sector and issuance of securities analysts' reports or recommendations;
-

- sales of substantial amounts of our stock by insiders and large stockholders, or the expectation that such sales might occur;
- general economic, industry and market conditions;
- additions or departures of key personnel;
- intellectual property, product liability or other litigation against us; and
- the other factors described in this "Risk Factors" section.

In addition, in the past, stockholders have initiated class action lawsuits against healthcare companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Upon completion of this offering, our executive officers, directors and current beneficial owners of 5% or more of our common stock will, in the aggregate, beneficially own approximately % of our

outstanding common stock; including any shares that may be purchased in this offering. These persons, acting together, would be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors and any merger or other significant corporate transactions. The interests of this group of stockholders may not coincide with the interests of other stockholders.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market following this offering, the market price of our common stock could decline significantly.

Upon completion of this offering, we will have outstanding shares of common stock, based on the number of shares outstanding as of March 31, 2014. This includes shares that we are selling in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, 12,114,314 shares are currently restricted as a result of securities laws or lock-up agreements but will be able to be sold after the offering as described in the section of this prospectus entitled "Shares Eligible for Future Sale."

In addition, promptly following the completion of this offering, we intend to file one or more registration statements on Form S-8 registering the issuance of approximately 4,187,158 shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans as of March 31, 2014. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and the restrictions of Rule 144 in the case of our affiliates.

Additionally, beginning six months after this offering, the holders of an aggregate of 12,419,952 shares of our common stock as of March 31, 2014, including shares of our common stock issuable upon the exercise of outstanding warrants, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. Please see "Description of Capital Stock—Registration Rights" in this prospectus for more information regarding these registration rights. Once we register the issuance of these shares, they can be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- our ability to successfully market and sell our Corus CAD test;
- the timing of cash collections from third-party payers;
- the extent to which our tests are eligible for coverage and reimbursement from third-party payers;
- changes in coverage and reimbursement or in reimbursement-related laws directly affecting our business;
- any intellectual property infringement lawsuit or opposition, interference or cancellation proceeding in which we may become involved;

- regulatory developments affecting our test or competing products; and
- total operating expenses.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating

results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

If securities or industry analysts do not publish research, or publish unfavorable research, about our business, our stock price and trading volume could decline.

Equity research analysts do not currently provide research coverage of our common stock, and we cannot assure you that any equity research analysts will provide research coverage of our common stock after the completion of this offering. In particular, as a smaller company, it may be difficult for us to attract the interest of equity research analysts. A lack of research coverage may adversely affect the liquidity and market price of our common stock. To the extent we obtain equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts cease coverage of our company or fail to publish reports on us regularly, demand for our stock could decrease, which in turn could cause our stock price or trading volume to decline.

Failure to achieve and maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could cause investors to lose confidence in our operating results and in the accuracy of our financial reports and could have a material adverse effect on our business and on the price of our common stock.

As a public company in the U.S., we will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, or Section 404, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting.

The controls and other procedures are designed to ensure that information required to be disclosed by us in the reports that we file with the Securities and Exchange Commission, or SEC, is disclosed accurately and is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms. We are in the early stages of conforming our internal control procedures to the requirements of Section 404, and we may not be able to complete our evaluation, testing and any required remediation needed to comply with Section 404 in a timely fashion. Our independent registered public accounting firm was not engaged to perform an audit of our internal control over financial reporting for the year ended December 31, 2013, or for any other period. Our independent registered public accounting firm's audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of our internal control over financial reporting. Accordingly, no such opinion was expressed. Even if we develop effective controls, these new controls may become inadequate because of changes in conditions or the degree of compliance with these policies or procedures may deteriorate.

Even after we develop these new procedures, material weaknesses in our internal control over financial reporting may be discovered. In order to fully comply with Section 404, we will need to retain additional employees to supplement our current finance staff, and we may not be able to do so in a timely manner, or at all. In addition, in the process of evaluating our internal control over financial reporting, we expect that certain of our internal control practices will need to be updated to comply with the requirements of Section 404 and the regulations promulgated thereunder, and we may not be able to do so on a timely basis, or at all. In the event that we are not able to demonstrate compliance with Section 404 in a timely

manner, or are unable to produce timely or accurate financial statements, we may be subject to sanctions or investigations by regulatory authorities such as the SEC or the stock exchange on which our stock is listed, and investors may lose confidence in our operating results, and the price of our common stock could decline. Furthermore, if we are unable to certify that our internal control over financial reporting is effective and in compliance with Section 404, we may be subject to sanctions or investigations by regulatory authorities such as the SEC or stock exchanges, and we could lose investor confidence in the accuracy and completeness of our financial reports, which could hurt our business, the price of our common stock and our ability to access the capital markets.

We will incur costs and demands upon management as a result of complying with the laws and regulations affecting public companies in the U.S., which may adversely affect our operating results.

As a public company listed in the U.S., we will incur significant additional legal, accounting and other expenses. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and NASDAQ, may increase legal and financial compliance costs and make some activities more time-consuming. These laws, regulations and standards are subject to varying interpretations, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us, and our business may be harmed.

Further, failure to comply with these laws, regulations and standards might also make it more difficult for us to obtain certain types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains.

We have not declared or paid cash dividends on our common stock to date. We currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not yield a return.

Although we currently intend to use the net proceeds from this offering in the manner described in the section entitled "Use of Proceeds" in this prospectus, we will have broad discretion over the use of proceeds from this offering. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment in us. Our failure to apply the net proceeds of this offering effectively could impair our ability to pursue our growth strategy or could require us to raise additional capital.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us, and the market price of our common stock may be lower as a result.

There are provisions in our certificate of incorporation and bylaws, as they will be in effect following this offering, that may make it difficult for a third party to acquire, or attempt to acquire, control of our

company, even if a change in control was considered favorable by you and other stockholders. For example, our board of directors will have the authority to issue up to 10,000,000 shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change in control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. An issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our charter documents will also contain other provisions that could have an anti-takeover effect, including:

- only one of our three classes of directors will be elected each year;
- stockholders will not be permitted to cumulate votes in the election of directors;
- our board of directors will have the exclusive right to elect a director to fill a vacancy or newly created directorship;
- stockholders will not be entitled to remove directors other than by a majority vote, and only for cause;
- stockholders will not be permitted to take actions by written consent;
- stockholders cannot call a special meeting of stockholders;
- stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings;
- our stockholders will not be permitted to amend the bylaws except by the affirmative vote of holders of at least $66^{2}/_{3}\%$ of the outstanding capital stock, although our bylaws may be amended by a simple majority vote of our board of directors; and
- the requirement for the affirmative vote of holders of at least $66^{2}/_{3}\%$ or more of the outstanding capital stock to amend many of the provisions described above.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions. These provisions could discourage potential acquisition proposals and could delay or prevent a change in control transaction. They could also have

the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that certain investors are willing to pay for our stock.

Our amended and restated certificate of incorporation will also provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

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We are an "emerging growth company," and, if we decide to comply only with reduced disclosure requirements applicable to emerging growth companies, our common stock could be less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act, or JOBS Act, enacted in April 2012, and for as long as we continue to be an "emerging growth company," we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to "emerging growth companies," including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We will continue to be an "emerging growth company" until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.0 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period. We cannot predict if investors will find our common stock less attractive if we choose to rely on these exemptions. If some investors find our common stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our common stock, and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies that become public can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards following the completion of this offering, and therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Future issuances of equity securities could result in additional dilution to our stockholders and could place restrictions on our operations and assets.

Pursuant to our equity incentive plans, we are authorized to grant equity-based incentive awards to our employees, directors and consultants. The number of shares of our common stock available for future grant under our 2013 Equity Incentive Plan, or the 2013 Plan, which will become effective immediately prior to the completion of this offering, is 1,142,857 plus the number of shares of our common stock reserved for issuance under our 2004 Stock Plan, or the 2004 Plan, as of the effective date of the 2013 Plan. After the 2013 Plan has become effective, the number of shares of our common stock reserved for issuance under our 2013 Plan will be increased (1) from time to time by the number of shares of our common stock forfeited upon the expiration, cancellation, forfeiture, cash settlement or other termination of awards under our 2004 Plan following the effective date of the 2013 Plan, and (2) on January 1 of each year at the discretion of our board of directors by up to (a) a number of additional shares of our common stock representing 4.0% of our then-outstanding shares of common stock on December 31 of such year or (b) such lesser number of shares of our common stock determined by our board of directors. Future option grants and issuances of common stock under our 2013 Plan may have an adverse effect on the market price of our common stock.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections titled "Prospectus Summary," "Risk Factors," "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business," contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify these statements by forward-looking words such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect," "potential" or the negative or plural of these words or similar expressions. These forward-looking statements include, but are not limited to, statements concerning the following:

- our expectation that, for the foreseeable future, substantially all of our revenue will be derived from sales of Corus CAD tests;
- our ability to obtain additional payer reimbursement coverage determinations for Corus CAD, including for both Medicare Advantage and commercial lives, and the timing of those determinations;
- our ability to conduct additional clinical and marketing activities to enhance our evidence package for Corus CAD;
- our expectations that clinician adoption of our Corus CAD test will increase as the test becomes more widely reimbursed, as we publish additional data and as the market awareness and acceptance of our test grows;

- our expectations of the benefits to patients, providers and payers of our Corus CAD test in the clinical work-up;
- the estimates of the number of patients presenting with symptoms that may be suggestive of obstructive CAD, as well as the total amount spent in the U.S. each year on these diagnostic work-ups;
- our expectations related to the expansion of our sales force and marketing efforts, and the size and geographic reach of our sales presence;
- our ability to leverage our research expertise and commercial experience to develop additional revenue opportunities, including product line extensions or enhancements, new product development and technology platform development;
- our ability to educate and inform payers and clinicians about the clinical benefits of Corus CAD;
- our ability to leverage our own dedicated sales force with those of commercial partners, in the U.S. and internationally, to expand our commercial reach;
- the clinical validity, clinical utility and economic value of our Corus CAD test;
- our estimates regarding our expenses, future revenue, anticipated capital requirements and our needs for additional financing;
- the scope of protection we establish and maintain for intellectual property rights covering our products and technologies;
- our reliance on clinical collaborators such as medical institutions, contract laboratories, collaborative partners and other third parties;
- the factors we believe drive demand for our Corus CAD test and our ability to sustain or increase such demand;
- our business strategy generally and our ability to achieve our strategic goals;

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- developments relating to our competitors and our industry;
-

- our expectations regarding the economic benefits of our Corus CAD test to the healthcare system;
- our expectations regarding our international expansion and opportunities;
- the factors that may impact our financial results;
- our expectations regarding licensing, acquisitions and strategic operations;
- our anticipated cash needs and our estimates regarding our capital requirements;
- our need for additional financing;
- our compliance with federal, state and foreign regulatory requirements, and the timing or likelihood of regulatory filings and approvals;
- the impact of accounting pronouncements and our critical accounting policies, judgments, estimates, models and assumptions on our financial results;
- the impact of the economy on our business, patients and payers; and
- anticipated trends and challenges in our business and the markets in which we operate.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in "Risk Factors" and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to publicly update any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect. We qualify all forward-looking statements by these cautionary statements.

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MARKET, INDUSTRY AND OTHER DATA

Unless otherwise indicated, information contained in this prospectus concerning our industry and the market in which we operate, including our market position, market opportunity and market size, is based on information from various sources, on assumptions that we have made based on such data and other similar sources and on our knowledge of the markets for our products. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates.

We have not independently verified any third-party information. While we believe the market position, market opportunity and market size information included in this prospectus is generally reliable, such information is inherently imprecise. In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled "Risk Factors" and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

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USE OF PROCEEDS

We estimate that the net proceeds from the sale of our common stock in this offering will be approximately $ million, based upon an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' option to purchase additional shares is exercised in full, we estimate that we will receive net proceeds of approximately $ million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering as follows:

- approximately $ million to provide working capital to expand our commercial organization, including sales and marketing personnel;
- approximately $ million to conduct additional clinical and marketing activities to enhance our evidence package for Corus CAD; and
- the remainder for research and development purposes as well as for general corporate purposes.

As of the date of this prospectus, we cannot specify with certainty the amount of the net proceeds we will use for these purposes. We may also use a portion of the net proceeds from this offering for the acquisition of, or investment in, technologies, solutions or businesses that complement our business, although we have no present commitments or agreements to enter into any such acquisitions or investments. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our commercialization efforts, the status of additional payer reimbursement coverage determinations for Corus CAD and the results of our research and development efforts. In particular, if we do not obtain positive coverage decisions from commercial payers in a timely manner, we may decide to postpone expansion of our commercial organization, including sales and marketing personnel, and reallocate that portion of the net proceeds from this offering to clinical and marketing activities to obtain such positive coverage decisions and to fund continuing operating losses during that additional time. In that event, we may also reallocate certain of such net proceeds from this offering for general corporate purposes. Accordingly, we will have broad discretion over the uses of the net proceeds from this offering. Pending these uses, we intend to invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market funds, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid, and do not anticipate declaring or paying in the foreseeable future, any cash dividends on our capital stock. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

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CAPITALIZATION

The following table sets forth our cash, cash equivalents and investments and our capitalization as of December 31, 2013:

- on an actual basis;
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on a pro forma basis, giving effect to the automatic conversion of all outstanding shares of preferred stock into 12,072,045 shares of common stock immediately prior to the closing of this offering, the reclassification of the preferred stock warrant liability of $468,000 as of December 31, 2013 into additional paid-in capital and the filing and effectiveness of our amended and restated certificate of incorporation in Delaware to be effective upon the closing of this offering; and

- on a pro forma as adjusted basis to reflect, in addition to the pro forma adjustments set forth above, the sale by us of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the information in this table together with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus.

	As of December 31, 2013		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share data)		
		(unaudited)	(unaudited)
Cash, cash equivalents and investments	$ 26,554	$ 26,554	$
Convertible preferred stock:			
Series AA convertible preferred stock, $0.001 par value, 1,895,235 shares authorized, 1,546,628 shares issued and outstanding, actual; no shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	13,280	—	—
Series BB convertible preferred stock, $0.001 par value, 6,530,543 shares authorized, 6,530,528 shares issued and outstanding, actual; no shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	82,673	—	—
Series CC-1 convertible preferred stock, $0.001 par value, 2,249,768 shares authorized, 2,102,573 shares issued and outstanding, actual; no shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	31,672	—	—
Series CC-2 convertible preferred stock, $0.001 par value, 2,024,791 shares authorized, 1,892,316 shares issued and outstanding, actual; no shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	31,577	—	—
Stockholders' equity (deficit):			
Preferred stock, $0.001 par value, no shares authorized, no shares issued and outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.001 par value, 30,000,000 shares authorized, 30,121 shares issued and outstanding, actual; 100,000,000 shares authorized, 12,102,166 shares issued and outstanding, pro forma; 100,000,000 shares authorized, issued and outstanding, pro forma as adjusted	—	12	
Additional paid-in capital	54,693	214,351	
Other comprehensive income	7	7	7

Accumulated deficit	(184,343)	(184,343)	(184,343)
Total stockholders' equity (deficit)	(129,643)	30,027	
Total capitalization	$ 29,559	$ 30,027	$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) each of cash, cash equivalents and investments, additional paid-in capital, total stockholders' equity (deficit) and total capitalization, on a pro forma as adjusted basis, by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of our common stock offered by us would increase (decrease) cash, cash equivalents and investments, additional paid-in capital, total stockholders' equity and total capitalization by approximately $ million, assuming the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.

The outstanding share information in the table above is based on 12,102,166 shares of our common stock (including preferred stock on an as-converted basis) outstanding as of December 31, 2013, and excludes:

- 2,125,140 shares of common stock issuable upon the exercise of outstanding stock options as of December 31, 2013 pursuant to our 2004 Plan at a weighted-average exercise price of $3.49 per share;
- 138 shares of common stock issuable upon the exercise of common stock warrants outstanding as of December 31, 2013, at a weighted-average exercise price of $91.35 per share;
- 345,952 shares of common stock issuable upon the exercise of preferred stock warrants outstanding as of December 31, 2013, at a weighted-average exercise price of $13.74 per share;
- 390,901 shares of common stock reserved for future issuance under our 2004 Plan as of December 31, 2013, which shares will cease to become available for future issuance at the time our 2013 Plan becomes effective in connection with this offering;
- 3,658,898 shares of common stock reserved for future issuance under our 2013 Plan (which consist of (i) 1,142,857 shares of common stock reserved for issuance under our 2013 Plan; (ii) 390,901 shares of common stock reserved for issuance under our 2004 Plan as of December 31, 2013, which shares will be added to the shares reserved under the 2013 Plan upon its effectiveness; and (iii) up to 2,125,140 additional shares as of December 31, 2013 that

may be added to the 2013 Plan upon the expiration, termination, forfeiture or other reacquisition of any shares of common stock issuable upon the exercise of stock awards outstanding under the 2004 Plan), which will become effective upon the execution and delivery of the underwriting agreement for this offering; and

- 500,000 shares of common stock to be reserved for future issuance under our 2013 Employee Stock Purchase Plan, to be effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

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DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering. The pro forma net tangible book value of our common stock as of December 31, 2013, was $ million, or $ per share. Pro forma net tangible book value per share represents our total tangible assets less our total liabilities, divided by the number of outstanding shares of common stock, after giving effect to the automatic conversion of all outstanding shares of preferred stock into 12,072,045 shares of common stock immediately prior to the closing of this offering.

After giving effect to (1) the automatic conversion of all outstanding shares of preferred stock into 12,072,045 shares of common stock immediately prior to the closing of this offering and (2) receipt of the net proceeds from our sale of shares of common stock at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2013, would have been approximately $ million, or $ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to our existing stockholders and an immediate dilution of $ per share to investors purchasing common stock in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed initial public offering price per share		$
Pro forma net tangible book value per share as of December 31, 2013	$	
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares in this offering		
Pro forma as adjusted net tangible book value per share after giving effect to this offering		
Dilution in pro forma net tangible book value per share to new investors in this offering		$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the pro forma as adjusted net tangible book value by $ per share and the dilution to new investors by $ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting estimated underwriting

discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) the pro forma as adjusted net tangible book value by approximately $ per share and the dilution to new investors by $( ) per share, assuming the assumed initial public offering price remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value per share would be $ per share, and the dilution in pro forma net tangible book value per share to investors in this offering would be $ per share.

The table below summarizes as of December 31, 2013, on a pro forma as adjusted basis described above, the number of shares of our common stock, the total consideration and the average price per share (1) paid to us by our existing stockholders and (2) to be paid by new investors purchasing our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set

forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	12,102,166	%	$	%	$
New investors(1)					
Total		100.0%	$	100.0%	

(1) Includes existing stockholders who participate in this offering.

The total number of shares of our common stock reflected in the discussion and tables above is based on 12,102,166 shares of our common stock (including preferred stock on an as-converted basis) outstanding as of December 31, 2013, and excludes:

- 2,125,140 shares of common stock issuable upon the exercise of outstanding stock options as of December 31, 2013 pursuant to our 2004 Plan at a weighted-average exercise price of $3.49 per share;
- 138 shares of common stock issuable upon the exercise of common stock warrants outstanding as of December 31, 2013, at a weighted-average exercise price of $91.35 per share;
- 345,952 shares of common stock issuable upon the exercise of preferred stock warrants outstanding as of December 31, 2013, at a weighted-average exercise price of $13.74 per share;

- 390,901 shares of common stock reserved for future issuance under our 2004 Plan as of December 31, 2013, which shares will cease to become available for future issuance at the time our 2013 Plan becomes effective in connection with this offering;
- 3,658,898 shares of common stock reserved for future issuance under our 2013 Plan (which consist of (i) 1,142,857 shares of common stock reserved for issuance under our 2013 Plan; (ii) 390,901 shares of common stock reserved for issuance under our 2004 Plan as of December 31, 2013, which shares will be added to the shares reserved under the 2013 Plan upon its effectiveness; and (iii) up to 2,125,140 additional shares as of December 31, 2013 that may be added to the 2013 Plan upon the expiration, termination, forfeiture or other reacquisition of any shares of common stock issuable upon the exercise of stock awards outstanding under the 2004 Plan), which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 500,000 shares of common stock to be reserved for future issuance under our 2013 Employee Stock Purchase Plan, to be effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

To the extent that any outstanding options are exercised, new options are issued under our stock-based compensation plans or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. If all outstanding options under our 2004 Plan and outstanding common stock warrants and preferred stock warrants as of December 31, 2013 were exercised, then our existing stockholders, including the holders of these options and warrants, would own % and our new investors would own % of the total number of shares of our common stock outstanding upon the closing of this offering.

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Entities affiliated with certain of our existing stockholders have indicated an interest in purchasing an aggregate of approximately in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these potential investors and any of these potential investors could determine to purchase more, less or no shares in this offering.

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SELECTED FINANCIAL DATA

You should read the following selected financial data together with our audited financial statements, the related notes appearing elsewhere in this prospectus and the information under the caption

"Management's Discussion and Analysis of Financial Condition and Results of Operations." The selected financial data included in this section are not intended to replace the financial statements and the related notes included elsewhere in this prospectus.

We derived the selected statements of operations data for the years ended December 31, 2012 and 2013 and the balance sheet data as of December 31, 2012 and 2013 from our audited financial statements appearing elsewhere in this prospectus. In our opinion, these unaudited financial statements have been prepared on a basis consistent with our audited financial statements and contain all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such financial data. Our historical results are not necessarily indicative of the results that may be expected in the future.

	Year Ended December 31,	
	2012	2013
	(in thousands, except share and per share data)	
Statements of Operations Data:		
Revenue	$ 2,475	$ 7,966
Operating expenses:		
Cost of revenue	4,680	7,320
Research and development	8,312	10,634
Sales and marketing	7,989	15,654
General and administrative	7,221	11,351
Total operating expenses	28,202	44,959
Loss from operations	(25,727)	(36,993)
Interest income	71	100
Other income, net	17	22
Net loss	(25,639)	(36,871)
Accretion and dividends on convertible preferred stock to redemption value	(9,194)	(12,043)
Net loss attributable to common stockholders	$ (34,833)	$ (48,914)
Net loss per share attributable to common stockholders(1):		
Basic and diluted	$ (3,909.87)	$ (2,399.74)
Weighted-average shares of common stock used in computing net loss per share attributable to common stockholders:		
Basic and diluted	8,909	20,383
Pro forma net loss per share of common stock, basic and diluted (unaudited)		$ (3.05)
Weighted-average shares used in computing pro forma net loss per share of common stock, basic and diluted (unaudited)		12,092,040

(1) See Note 2 within the notes to our financial statements appearing elsewhere in this prospectus for a description of the method used to calculate basic and diluted net loss per common share and pro forma basic and diluted net loss per common share.

	As of December 31,	
	2012	2013
	(in thousands)	
Balance Sheet Data:		
Cash, cash equivalents and investments	$ 65,995	$ 26,554
Working capital	63,027	23,256
Total assets	70,408	37,694
Convertible preferred stock	147,159	159,202
Total stockholders' deficit	(82,365)	(129,643)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section titled "Selected Financial Data" and our financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, estimates, beliefs, objectives, expectations and intentions. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those below and elsewhere in this prospectus, particularly discussed in the "Risk Factors" section.

Business Overview

We are a molecular diagnostics company developing and commercializing novel, proprietary tests that help improve treatment decisions, enhance patient outcomes and reduce the overall cost of care. We use genomic technologies to provide healthcare professionals with critical, actionable information to improve patient care and management. Our product strategy addresses the needs of three key healthcare constituents: patients, healthcare providers and public and private payers. Our initial focus is on diagnostics for cardiovascular diseases, specifically coronary artery disease, or CAD, arrhythmia and heart failure.

Our Corus® CAD test is the first and only commercially available blood-based gene expression test that provides a current-state assessment for non-diabetic patients with symptoms that are suggestive of obstructive CAD. Corus CAD helps clinicians rule out obstructive CAD as the cause of these symptoms. Ruling out CAD as the cause of these symptoms can help avoid significant costs, risks and inconveniences associated with unnecessary referrals, non-invasive imaging and invasive coronary angiography, also known as cardiac catheterization. Our test has been clinically validated in independent patient cohorts, including two prospective, multicenter U.S. trials, PREDICT and COMPASS. Corus CAD became commercially available in 2009 and, through December 31, 2013, we have delivered results for over 55,000 tests. In August 2012, Corus CAD obtained Medicare Part B coverage from the regional Medicare Administrative Contractor, or MAC, in California, making the test a covered benefit for the estimated 49 million covered lives in the U.S. We perform the Corus CAD test in our clinical laboratory, which has been certified by the Clinical Laboratory Improvement Amendments of 1988, or CLIA, under the regulations of the Centers for Medicare & Medicaid Services, or CMS, and also has been accredited by the College of American Pathologists, or CAP.

The following highlights some of our key historical business milestones:

- We were founded and incorporated in Delaware in July 2003. From inception through early 2007, we were primarily engaged in discovery and research activities related to potential diagnostics in CAD, arrhythmia and heart failure;
- In early 2007, we focused our activities on CAD and, in July of that year, we began patient enrollment in our PREDICT trial to develop and validate the Corus CAD test in a population of patients who had been referred for invasive coronary angiography;
- In February 2009, we obtained CLIA certification of our onsite clinical laboratory;
-

In June 2009, we commercially launched Corus CAD in nine U.S. communities through a nine-person sales force;

- In November 2009, we presented results from the PREDICT trial;
- In April 2010, we began patient enrollment in our COMPASS trial to conduct a second validation trial evaluating the Corus CAD test in an independent cohort of patients who had received a referral for MPI, but who had not yet been referred for invasive coronary angiography;

- In October 2010, we announced the publication of the results of the PREDICT trial;
- In November 2011, we presented results from the COMPASS trial, which validated the performance and accuracy of Corus CAD in a patient population that more closely resembled our intended use population than our PREDICT trial;
- In August 2012, the Corus CAD test obtained Medicare Part B coverage retroactive to all tests for qualifying patients performed starting January 1, 2012, making the test a covered benefit for the estimated 49 million Medicare beneficiaries in the U.S.;
- In the fourth quarter of 2012, we increased our sales force from 10 to 20 representatives;
- In February 2013, we announced the publication of the results of our COMPASS trial;
- In May 2013, we received CAP accreditation of our onsite clinical laboratory;
- In May 2013, we announced the publication of the results of our IMPACT-CARD trial and we presented the results of our IMPACT-PCP trial, both of which demonstrated that the Corus CAD test changes clinician decision-making in clinically relevant ways;
- In May 2013, we delivered Corus CAD test results to our first customers outside the U.S. under a sales and marketing agreement with Core Diagnostics India;
- In August 2013, we announced the publication of a comprehensive review of the evidence demonstrating that Corus CAD can help clinicians accurately and safely exclude obstructive CAD as the cause of a patient's symptoms and lead to improved patient management;
- In October 2013, we presented the results of our Registry I study, which showed that the use of Corus CAD helps reduce unnecessary patient referrals for cardiac testing;
-

In November 2013, we delivered results for our 50,000th Corus CAD test;

- During 2013, we increased our sales force from 20 to 34 representatives;
- In February 2014, our health economics study, which we refer to as our cost effectiveness analysis and which determines the healthcare economic impact of using Corus CAD prior to invasive or non-invasive imaging over a 30-year time horizon, was published;
- In February 2014, we announced the publication of our budget impact model, which found that by using Corus CAD prior to referral for cardiac imaging, a commercial health plan can realize an estimated 9.4% reduction in costs compared to the usual care, for a projected savings of $0.77 per member per month;
- In March 2014, we announced the publication of our IMPACT-PCP trial, which reinforced the value of Corus CAD as an initial diagnostic test for the evaluation of patients presenting with non-acute symptoms suggestive of obstructive CAD in the primary care setting;
- In March 2014, we were informed that our Registry I study was accepted for publication; and
- In March 2014, we presented interim data from the PRESET registry study, which further demonstrated that the Corus CAD score influenced the rate of cardiology referrals among patients presenting with non-acute symptoms suggestive of obstructive CAD.

Our total revenue in 2011 was $1.5 million, which was driven by test volume of 13,581. This resulted in average revenue per test of $112 in 2011.

Our total revenue increased from $2.5 million in 2012 to $8.0 million in 2013, which was driven by an increase in test volume primarily attributable to an increase in our sales force from 20 to 34 representatives in 2013, the full-year impact of an increase in our sales force from 10 to 20 in the fourth quarter of 2012 and an increase in average revenue per test. For the years ended December 31, 2012 and December 31, 2013, we delivered results for 9,990 tests and 22,371 tests, respectively. We have never been profitable

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and have incurred significant losses since our inception, including net losses of $25.6 million in 2012 and $36.9 million in 2013. As of December 31, 2013, our total stockholders' deficit was $129.6 million and we had $26.6 million in cash, cash equivalents and investments. Our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of, and for the year ended, December 31, 2013, describing the existence of substantial doubt about our ability to continue as a going concern. This uncertainty arose from our results of operations and financial condition and the conclusion that we did not have sufficient cash to operate for 12 months from year-end. There have been no adjustments in the accompanying financial statements to reflect this uncertainty. See "Liquidity and Capital Resources" and Note 1 to Notes to Financial Statements for additional information describing the circumstances that led to the inclusion of this explanatory paragraph.

As part of our commercialization strategy, we intend to continue to expand our sales presence and increase our marketing expense as we seek greater market awareness and clinician adoption of Corus CAD and broader payer coverage and reimbursement. We also expect research and development expenses to increase in future periods as we increase investments in our product pipeline, conduct additional studies to support our Corus CAD test and develop process improvements related to our Corus CAD test.

Medicare Coverage and Reimbursement

We derive substantially all of our revenue from sales of our Corus CAD test and we rely on reimbursement primarily from third-party payers, including government programs such as Medicare and private payers such as managed care organizations. The amount of reimbursement we receive related to the sale of each Corus CAD test is primarily determined by whether these third-party payers have issued positive coverage decisions to make Corus CAD a covered benefit for their member patients on whose behalf our clinician customers order the test. In August 2012, we obtained Medicare Part B coverage for Corus CAD from the regional MAC in California at the time, Palmetto GBA, or Palmetto, at a fixed payment amount, retroactive to all tests performed in our California laboratory for qualifying patients starting January 1, 2012. At that time, Palmetto established the fixed payment amount at which Medicare would reimburse us for Medicare patients within the defined coverage conditions. On September 16, 2013, the regional MAC in California transitioned from Palmetto to Noridian Healthcare Solutions, LLC, or Noridian. However, Palmetto continues to establish coverage, coding and reimbursement policies for Corus CAD and other molecular diagnostics in our MAC region pursuant to the MolDx program for molecular diagnostics, while Noridian processes claims for tests performed in our MAC region. Because our laboratory is located in California, we currently submit claims to Noridian, but our coverage and fixed payment amount continues to be established by Palmetto through the MolDx program. As further described below, we expect that beginning in 2017, the Medicare payment rate for Corus CAD will be reset based on the weighted median of its reported private payer payment rates.

Our average revenue per test, which reflects our total revenue in a period divided by all tests for which we deliver results to clinicians in that period, including tests for which we receive no reimbursement, increased significantly following the Medicare Part B coverage decision in August 2012. Accordingly, and in anticipation of additional positive coverage decisions from other payers, we began to expand our commercial presence by increasing the size of our sales force and enhancing our marketing efforts. As of December 31, 2013, we had 34 sales representatives and offered Corus CAD in a total of 34 U.S. communities in 14 states.

Since Corus CAD obtained Medicare Part B coverage, we have established agreements with several commercial third-party payers to extend the Medicare coverage to their Medicare Advantage (Medicare managed care) lives. As of March 31, 2014, we had agreements with commercial payers that collectively cover approximately 44% of all Medicare Advantage lives in the U.S. We are working with these commercial payers to extend coverage to their commercial lives and with other commercial payers to provide for coverage of both their Medicare Advantage and commercial lives.

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While we commercially launched Corus CAD in June 2009, we did not generate meaningful revenue on sales of the Corus CAD test until it obtained Medicare Part B coverage. In addition, prior to that coverage, our average revenue per test was significantly less than our cost of revenue per test. Due to these financial implications, over the period from our commercial launch in June 2009 through the third quarter of 2012, we intentionally maintained a limited commercial sales force focused on just a few communities.

During this period, we focused on developing, presenting and publishing the data for our evidence package—consisting of analytical validity, clinical validity, clinical utility and economic value data—to support reimbursement coverage of Corus CAD by payers. Immediately prior to Corus CAD obtaining Medicare Part B coverage, we had 10 sales representatives selling Corus CAD in 10 U.S. communities.

The U.S. government has shown significant interest in pursuing healthcare reform and reducing healthcare costs. Annual federal budget negotiations frequently include healthcare payment reform measures impacting clinical laboratory payments. On April 1, 2013, cuts to the federal budget resulting from sequestration were implemented, requiring a 2% cut in Medicare payments for all services, including our Corus CAD test. In December 2013, Congress enacted the Bipartisan Budget Act of 2013, which extended this 2% cut from sequestration for an additional two years until 2023.

The Protecting Access to Medicare Act of 2014, or PAMA, was enacted on April 1, 2014. PAMA establishes a new payment methodology for clinical laboratory diagnostic tests provided to Medicare patients. Under PAMA, for an Advanced Diagnostic Laboratory Test performed in calendar year 2017 and subsequent years, CMS will set the Medicare payment for each test based on the weighted median of reported private payer payment rates for that test. We believe that Corus CAD meets the definition of an Advanced Diagnostic Laboratory Test under PAMA. CMS will require clinical laboratories, including us, to begin reporting private payer rate information beginning in 2016.

Financing

In August and October 2012, we completed a preferred stock financing in which we received net cash proceeds of $57.7 million. To date, we have raised over $200 million in capital through private equity financings.

Financial Operations Overview

Revenue

We operate in one operating segment and derive substantially all of our revenue from sales of our Corus CAD test. We currently market the Corus CAD test to U.S. healthcare providers through our direct sales force that targets primary care clinicians, including physicians, physician assistants and nurse practitioners, as well as cardiologists. The healthcare providers who order the tests and on whose behalf we provide our laboratory testing services are not responsible for the payment for these services. The party that pays us for our laboratory testing services is commonly referred to as a "payer." Payers consist of (1) third-party payers, including government programs, such as Medicare and Medicaid, and private or commercial payers, such as insurance companies and managed care organizations, and (2) patients who pay us directly. In May 2013, we began selling a limited number of tests in India under our agreement with Core Diagnostics India, or Core Diagnostics.

Our revenue is a function of both Corus CAD test volume and the average revenue per test.

Corus CAD Test Volume

Test volume is based on the number of Corus CAD tests that we conduct and for which we ultimately deliver results to a clinician. Test volume for the year ended December 31, 2012 was 9,990 compared to 22,371 for the year ended December 31, 2013. We currently offer the Corus CAD test in the U.S. through our direct sales force. In May 2013, we began selling a limited number of tests in India under our agreement with Core Diagnostics. We expect our test volume to increase as (1) the number of tests that our current

clinician customers order increases, (2) the number of clinicians who order the test in the communities in which we currently operate increases and (3) the number of communities targeted by our sales force increases as we grow our sales force. We believe clinician adoption of our test will increase as the test becomes more widely reimbursed, as we publish additional data and as the market awareness and acceptance of our test grows.

Average Revenue per Test

Average revenue per test is calculated based on our total revenue for the laboratory testing services we perform on behalf of clinicians in a particular period divided by the total number of Corus CAD tests for which we deliver results to clinicians in that period, including tests for which no reimbursement is obtained. The total revenue we generate and, consequently, our average revenue per test, are primarily dependent on the level of reimbursement we receive from Medicare and commercial payers for their Medicare Advantage and commercial lives, as these third-party payers comprise the substantial majority of our test volume. The level of reimbursement we receive is primarily determined by whether third-party payers have issued a positive coverage decision and agreed to pay for the test. In August 2012, we obtained Medicare Part B coverage for Corus CAD, retroactive to all tests performed in our California laboratory for qualifying patients starting January 1, 2012. At that time, Palmetto also established the fixed payment amount at which Medicare would reimburse us for Medicare patients within the defined coverage conditions, which may be subject to change in the future. For Medicare patients, we only deliver results to clinicians for tests performed for patients that are within the scope of the Medicare coverage conditions. Accordingly, we only bill Medicare at the fixed payment amount for tests that are within the scope of the Medicare coverage conditions and that we believe are eligible for reimbursement. Because of the retroactive nature of the coverage decision, we received payments in the third and fourth quarters of 2012 related to test results delivered (1) from the beginning of 2012 through the date Corus CAD obtained Medicare Part B coverage and, in addition, (2) during the third and fourth quarters. As a result, our total revenue and revenue per test related to Medicare test volume in the third and fourth quarter of 2012 was higher than in subsequent periods. Since that time, we have established agreements with several commercial third-party payers to extend the Medicare coverage to their Medicare Advantage (Medicare managed care) lives. As of March 31, 2014, we had agreements with commercial payers that collectively cover approximately 6.1 million U.S. Medicare Advantage lives, or approximately 44% of all Medicare Advantage lives in the U.S. We are working with these commercial third-party payers to extend coverage to their commercial lives and with other commercial payers to provide for coverage of both their Medicare Advantage and commercial lives. To date, no other third-party payers have issued positive coverage decisions for the Corus CAD test, and we do not have agreements with third-party payers that collectively provide coverage for the substantial majority of U.S. commercial lives. We expect our average revenue per test to increase as we obtain positive coverage decisions, if any, from commercial payers for their Medicare Advantage and commercial lives.

Cost of Revenue

Cost of revenue reflects the aggregate costs incurred in delivering our Corus CAD test results to clinicians and includes expenses for (1) direct labor, (2) logistics, (3) supplies, (4) equipment and infrastructure and (5) royalties. Direct labor includes the costs of our laboratory, customer service and supply chain personnel. Logistics includes the costs of the sample collection containers and the sample collection supplies, as well as the shipping charges incurred in transporting the sample collection containers and the supplies to our clinician sites and samples from the clinician sites to our laboratory. Supplies reflects the costs of the supplies used to process test samples (including sample accessioning, RNA extraction, cDNA synthesis, reverse transcription polymerase chain reaction, or RT-PCR). Equipment and infrastructure includes depreciation and maintenance costs associated with equipment used to process

test samples and allocated facility occupancy and overhead costs. Direct labor, logistics, supplies and equipment and infrastructure expenses represent the total sample processing costs associated with performing our test and are recorded as tests are processed. Costs recorded for sample processing represent the cost of all the tests processed

during the period regardless of whether revenue was recognized with respect to the test. Royalties for licensed technology related to the Corus CAD tests are calculated as a percentage of cash collections or the amortization of a fully-paid license. Costs associated with processing samples related to clinical studies are reflected as research and development expenses.

Direct labor and equipment and infrastructure expenses are generally fixed in nature and we expect these expenses to decrease as a percentage of total cost of revenue as test volume increases. Logistics, supplies, and royalties are generally variable in nature and we expect these expenses to increase as test volume increases.

Average Cost of Revenue per Test

Average cost of revenue per test is calculated based on total cost of revenue divided by the total number of Corus CAD tests for which we deliver results to clinicians in that period, including tests for which no reimbursement is obtained. The total cost of revenue and, consequently, our average cost of revenue per test, are primarily dependent on the total number of tests for which we deliver results to clinicians in a period.

Research and Development Expenses

Research and development expenses represent costs incurred to (1) develop new technology and process improvements related to our Corus CAD test, (2) conduct clinical studies primarily related to generating clinical utility and comparative efficacy data for our Corus CAD test, including costs associated with processing samples associated with such studies, (3) carry out research and discovery work to develop future tests and (4) maintain and support the Corus CAD intended use. Research and development expenses include personnel-related expenses, reagents and supplies used in research and development laboratory work, clinical study expenses, equipment, contract services, other outside costs and infrastructure expenses, including allocated facility occupancy and overhead costs.

Sales and Marketing Expenses

Selling and marketing expenses represent costs incurred to (1) sell, promote and increase awareness of our Corus CAD test to both clinicians and payers, (2) educate patients, clinicians and payers about the attributes and value of our Corus CAD test, (3) sponsor medical education and medical meeting participation to disseminate scientific and economic evidence related to our Corus CAD test, (4) perform qualitative and quantitative primary market research, (5) support patient advocacy organizations and clinician associations in their education and outreach efforts and (6) maintain membership in industry organizations. Sales and marketing expenses include personnel-related expenses, educational and promotional expenses, market access initiatives, market research and analysis, and infrastructure expenses, including allocated facility occupancy and overhead costs. Our sales force compensation includes annual salaries and eligibility for quarterly commissions based on the achievement of predetermined sales goals and other management objectives.

General and Administrative Expenses

General and administrative expenses consist primarily of (1) personnel-related expenses, including employee salaries, bonuses, benefits and stock-based compensation, (2) professional service fees related to billing and collection, accounting, tax, legal and other contract and administrative services and (3) related infrastructure expenses, including allocated facility occupancy and overhead costs.

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Critical Accounting Policies and Significant Judgments and Estimates

Revenue Recognition

We recognize revenue when the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured. Persuasive evidence of an arrangement exists when we have a contractual arrangement in place with the payer. Delivery has occurred or services have been rendered when a test is performed and a patient report is generated and delivered to the clinician or made available on the clinician's web portal. If persuasive evidence of an arrangement exists and delivery has occurred or services have been rendered, we determine whether the fee charged is fixed or determinable and collectability of those fees is reasonably assured. We assess whether the fee is fixed or determinable based on the existing arrangement with the payer or we determine whether we have sufficient history with a payer to reliably estimate the payer's individual payment patterns. We assess collectability by evaluating historical cash receipts and individual payer's outstanding balances. To the extent all criteria set forth above are not met when test results are delivered, revenue is recognized when cash is received from the payer.

Revenue is recognized net of allowances for differences between amounts billed and the estimated receipts from payers. The amount we expect to collect may be lower than the agreed upon amount due to several factors, such as the amount of patient co-payments, the existence of secondary payers and claim denials. Estimated receipts are based upon historical payment practices of payers. Differences between estimated allowances and actual cash receipts are recorded as an adjustment to revenue, which have been immaterial to date. We periodically adjust the estimated allowances based upon historical payment trends.

Stock-based Compensation

Stock-based compensation awards

We issue stock-based compensation awards to employees and non-employees, generally in the form of incentive stock options, or ISOs, and nonstatutory stock options, or NSOs. We account for our stock-based compensation awards in accordance with Financial Accounting Standards Board Accounting Standards Codification, or ASC, Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all stock-based payments to employees, including grants of employee stock options and modifications to existing stock options, to be recognized in the statements of operations and comprehensive loss based on their fair values. We account for stock-based compensation awards to non-employees in accordance with ASC Topic 505-50, *Equity-Based Payments to Non-Employees*, which requires the fair value of the award to be remeasured as the award vests. We generally recognize the compensation cost of stock-based compensation awards to employees on a straight-line basis over the

vesting period of the award and using an accelerated attribution model for awards to non-employees. Described below is the methodology we have utilized in measuring stock-based compensation expense. Following the consummation of this offering, stock option, restricted stock unit and restricted stock award values will be determined based on the quoted market price of our common stock.

We estimate the fair value of our stock-based awards to employees and non-employees using the Black-Scholes option pricing model, which requires the input of highly subjective assumptions, including (1) the expected volatility of our common stock, (2) the expected term of the award, (3) the risk-free interest rate and (4) expected dividend yield.

Due to the lack of a public market for the trading of our common stock and a lack of company specific historical and implied volatility data, we have based our estimate of expected volatility on the historical volatility of a group of similar life science and medical technology companies that are publicly traded. For these analyses, we have selected companies with comparable characteristics to ours including enterprise value, risk profiles, position within the industry, and with historical share price information sufficient to meet the expected life of the stock-based awards. We compute the historical volatility data using the daily closing prices for the selected companies' common stock during the equivalent period of the calculated

expected term of our stock-based awards. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own common stock price becomes available. We have estimated the expected life of our employee stock options using the "simplified" method, whereby the expected life equals the average of the vesting term and the original contractual term of the option. The risk-free interest rates are based on the U.S. Treasury yield curve in effect during the period the options were granted.

We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. We also are required to estimate forfeitures at the time of grant, and revise those estimates in subsequent periods if actual forfeitures differ from our prior estimates. To the extent that actual forfeitures differ from our estimates, the difference is recorded as a cumulative adjustment in the period the estimates are revised.

We have computed the fair value of employee stock options using the Black-Scholes option pricing model based on the date of grant with the following weighted-average assumptions:

	Year Ended December 31,	
	2012	2013
Volatility	74%	66%
Expected term (in years)	6.0	5.9
Risk-free interest rate	1.1%	1.0%
Dividend yield	—	—

We recognized total stock-based compensation expense as follows (in thousands):

	Year Ended December 31,	
	2012	2013
Cost of revenue	$ 7	$ 29

Research and development	144	385
Sales and marketing	121	417
General and administrative	194	765
	$ 466	$ 1,596

As of December 31, 2013, $3.6 million of total unrecognized compensation cost was related to employee options and is expected to be recognized over a weighted-average period of 1.93 years.

The following table presents the grant dates and number of underlying shares of stock options granted since January 1, 2012, along with the corresponding exercise price for each option grant and the fair value per share utilized to calculate stock-based compensation expense:

Date of grant	Number of shares underlying options granted	Exercise price per share	Common stock fair value per share on grant date	Retrospective fair value per share on grant date
March 30, 2012	50,755	$ 3.36	$ 3.36	N/A
May 22, 2012	8,895	3.36	3.36	N/A
October 18, 2012	109,699	2.73	2.73	N/A
April 14, 2013	748,708	4.20	4.20	$ 7.67(1)
May 29, 2013	61,700	4.20	4.20	7.67(1)
September 10, 2013	85,515	7.67	7.67	N/A

(1) The fair value of common stock at the grant date was adjusted in connection with a retrospective fair value assessment for financial reporting purposes, as described below.

Determination of Fair Value of Stock Options

We are a private company and there has been no public market for our common stock to date. The estimated fair value of our common stock has been determined by our board of directors based on valuation estimates provided by management and prepared in accordance with the framework of the American Institute of Certified Public Accountants' Technical Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, or AICPA Practice Aid, as well as with input from independent third-party valuations. We performed these contemporaneous valuations as of December 31, 2011, October 1, 2012, February 28, 2013, June 30, 2013 and December 31, 2013.

Our valuations of our common stock were based on a number of objective and subjective factors, including:

- external market conditions affecting the life sciences industry sector and the prices at which we sold shares of preferred stock;
- the superior rights and preferences of securities senior to our common stock at the time of each valuation, including the liquidation preferences of our convertible preferred stock;
-

- the lack of liquidity of our common stock as a private company and the state of the initial public offering market for similarly situated private companies;
- the likelihood of achieving a liquidity event such as an initial public offering and valuation conditions on our ability to go public;
- the achievement of business milestones, including coverage decisions by third-party payers;
- the valuation of publicly traded companies in the life sciences and medical technology sectors; and
- general U.S. economic conditions, including stock volatility and interest rates.

The dates of our valuations have not always coincided with the dates of our stock-based compensation grants. Our board of directors intended all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the grant date. Accordingly, in determining the exercise prices of the options set forth in the table above, our board of directors considered, among other things, the most recent valuations of our common stock and our assessment of additional objective and subjective factors we believed to be relevant as of the grant date. The additional factors considered when determining any changes in fair value between the most recent valuation and the grant dates included our stage of development, our operating and financial performance and current business conditions. However, there were no events or circumstances existing on any of the grant dates that warranted a finding that the fair value per share of common stock had changed from the most recent valuation.

There are significant judgments and estimates inherent in the determination of fair value of our common stock. These judgments and estimates include assumptions regarding our future operating performance, the time to completing an initial public offering or other liquidity event and the determinations of the appropriate valuation methods. If we had made different assumptions, our stock-based compensation expense, net loss and net income (loss) per share attributable to common stock could have been significantly different.

December 31, 2011 Valuation

In accordance with the AICPA Practice Aid, for the valuation at December 31, 2011, we used the discounted cash flow method of the income approach to calculate our equity value. The discounted cash flow method derives the equity value of a business by estimating future returns discounted by its cost of capital.

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In accordance with the AICPA Practice Aid, we considered various methods for allocating the enterprise value across our classes and series of capital stock to determine the fair value of our common stock and determined that the option-pricing method, or OPM, was the appropriate model to use. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the liquidation preferences of the preferred stock. Under this method, the common stock

has value only if the funds available for distribution to stockholders exceed the value of the liquidation preference at the time of a liquidity event.

The OPM uses the Black-Scholes option pricing model to price the call options. This model defines the securities' fair values as functions of the current fair value of a company and uses assumptions such as the anticipated timing of a potential liquidity event, the risk-free interest rate as of the valuation date and the estimated volatility of the equity securities. Additionally, because our common stock is unregistered and the holder of a minority interest in the common stock may not influence the timing of a liquidity event, we applied a discount for lack of marketability.

The resulting fair value of the common stock at December 31, 2011 was $3.36 per share, an increase from the prior valuation of $2.00 per share at February 18, 2011. The increase in the common stock valuation was primarily due to changes in our forecasted reimbursement assumptions that pushed out revenue growth to 2012-2013, completion in 2011 of the PREDICT and COMPASS trials, our implementation of certain process redesigns to lower cost of revenue and the hiring of a new Chief Financial Officer and adding two new senior management positions.

For the stock options granted on March 30, 2012 and May 22, 2012, our board of directors determined the fair value of our common stock to be $3.36 per share. The board of directors considered all relevant facts, including among other things, the December 31, 2011 valuation and in its judgment determined that there were no internal or external developments that would indicate that the fair value of our common stock would have changed from December 31, 2011.

October 1, 2012 Valuation

In accordance with the AICPA Practice Aid, for the valuation at October 1, 2012, we used the back-solve method of the OPM for determining the fair value of our common stock based on the knowledge that the Series CC-2 preferred stock financing was in the process of closing. We applied the OPM method to solve for the equity value and corresponding value of common stock based on the Series CC-2 preferred stock financing, which closed on October 12, 2012. Given the proximity of the valuation date to the Series CC-2 preferred stock financing, we believe the per share issuance price of the Series CC-2 preferred stock provides an indication of the fair value of our equity as of October 1, 2012.

We then calculated the implied enterprise value under two different scenarios, a future initial public offering scenario and a sale of the company scenario. Each of the future initial public offering value scenario and the sale of the company scenario provide relevant estimates of fair value, which differed significantly. Accordingly, we applied different weighting to each of these scenarios to determine an initial enterprise value, with 10% weighting assigned to the future initial public offering scenario and 90% weighting assigned to the sale of the company scenario, to create a range of estimated weighted value. We then allocated the initial estimated enterprise value to the common stock using the Black-Scholes OPM, which was discounted to account for the lack of marketability of our common stock.

The resulting fair value of the common stock at October 1, 2012 was $2.73 per share, a decrease from the prior valuation of $3.36 per share at December 31, 2011. The decrease in the common stock valuation was primarily due to a delay in the timing of our expected reimbursement coverage.

For the stock options granted on October 18, 2012, our board of directors determined the fair value of our common stock to be $2.73 per share. The board of directors considered all relevant facts, including among other things, the October 1, 2012 valuation and in its judgment determined that there were no internal or external developments that would indicate that the fair value of our common stock would have changed from October 1, 2012.

February 28, 2013 Valuation

In accordance with the AICPA Practice Aid, for the valuation at February 28, 2013, we used the discounted cash flow method of the income approach and the market approach to calculate our equity value. The market approach estimates the value of a going concern business by comparing the subject company to similar firms whose stock is publicly traded.

We used the OPM to allocate the enterprise value across our classes of and series of capital stock to determine the fair value of our common stock using two different scenarios, a public offering scenario and a sale of the company scenario. The difference between the two scenarios being the removal of the dividends and the participation rights under the initial public offering scenario.

We then calculated the implied enterprise value under two different scenarios, a future initial public offering scenario and a sale of the company scenario. Each of the future initial public offering value scenario and the sale of the company scenario provide relevant estimates of fair value, which differed significantly. Accordingly, we applied different weighting to each of these scenarios to determine an initial enterprise value, with 15% weighting assigned to the future initial public offering scenario and 85% weighting assigned to the sale of the company scenario, to create a range of estimated weighted value. We then allocated the initial estimated enterprise value to the common stock using the Black-Scholes OPM, which was discounted to account for the lack of marketability of our common stock.

The resulting fair value of the common stock at February 28, 2013 was $4.20 per share, an increase from the prior valuation of $2.73 per share at October 1, 2012. The increase in the common stock valuation was primarily attributable to the increase in the weighting applied to the initial public offering scenario due to the publication of the COMPASS study in February 2013.

Our board of directors granted options to purchase common stock on April 14, 2013 and May 29, 2013, with each option having an exercise price of $4.20 per share.

June 30, 2013 Valuation

By early June 2013, it was becoming clearer that the feasibility of completing an initial public offering and the valuation that we could achieve in such a potential offering were improving due to the better overall market conditions and the improving markets for life sciences public offerings. We believe that these significant market trends increased the probability of an initial public offering and, subsequently, we performed a retrospective valuation as of June 30, 2013.

In accordance with the AICPA Practice Aid, for the valuation dated June 30, 2013, we used the probability-weighted expected return method, or PWERM, to calculate our equity value. Under the PWERM, share value is derived from the probability-weighted present value of expected future investment returns, considering possible outcomes available to us, as well as the economic and control rights of each share class. Our June 30, 2013 valuation considers time to liquidity and various types of liquidity events, including the following four scenarios: (1) an initial public offering; (2) a high-value sale of the Company; (3) a low-value sale of the Company; and (4) a liquidation. The June 30, 2013 valuation assigned the following weighting to the four scenarios: 60% for an initial public offering; 25% for a low-value sale of the Company; 10% for a high-value sale of the Company; and 5% for a liquidation.

The resulting fair value of the common stock at June 30, 2013 was $7.67 per share, an increase from the prior valuation of $4.20 per share. The increase in the common stock valuation was primarily due to

(1) the subsequent authorization by our board of directors at the May 29, 2013 board meeting for us to proceed with evaluating the option of an initial public offering, (2) the selection of the underwriters, which we completed during the week of June 10, 2013 and (3) the organizational meeting held on June 13, 2013 to formally begin the process for this offering, including the registration statement drafting process.

As noted above, we determined the retrospective valuation as of June 30, 2013 and, for financial reporting purposes, this value has been applied retrospectively to the grants made as of April 14, 2013 and May 29, 2013.

For the stock options granted on September 10, 2013, our board of directors determined the fair value of our common stock to be $7.67 per share. The board of directors considered all relevant facts, including among other things the June 30, 2013 valuation, and in its judgment determined that there were no internal or external developments that would indicate that the fair value of our common stock would have changed from June 30, 2013.

December 31, 2013 Valuation

In accordance with the AICPA Practice Aid, for the valuation dated December 31, 2013, we used the probability-weighted expected return method, or PWERM, to calculate our equity value. Under the PWERM, share value is derived from the probability-weighted present value of expected future investment returns, considering possible outcomes available to us, as well as the economic and control rights of each share class. Our December 31, 2013 valuation considers time to liquidity and various types of liquidity events, including the following four scenarios: (1) an initial public offering; (2) a high-value sale of the Company; (3) a low-value sale of the Company; and (4) a liquidation. The December 31, 2013 valuation assigned the following weighting to the four scenarios: 60% for an initial public offering; 25% for a low-value sale of the Company; 10% for a high-value sale of the Company; and 5% for a liquidation.

The resulting fair value of the common stock at December 31, 2013 was $5.19 per share, a decrease from the prior valuation of $7.67 per share. The decrease in the common stock valuation was primarily due to a lower expected value for an initial public offering.

No options to purchase common stock were granted between September 10, 2013 and December 31, 2013.

Offering Price Range

Based on an assumed offering price of $, which is the midpoint of the estimated price range, the offering price in this offering is a $, or %, increase over our December 31, 2013 determination of the estimated fair value of our common stock of $5.19.

We believe the difference between the fair value of our common stock as of December 31, 2013 and our anticipated initial offering price range is attributable to several factors, including the following:

The initial offering price range necessarily assumes that our initial public offering has occurred and a public market for our common stock has been created and, therefore, excludes the discounts associated with the timing or likelihood of an initial public offering, which were appropriately included in the valuation prepared as of December 31, 2013. In particular, the assumed initial public offering price represents a

future price for shares of our common stock that are immediately freely tradable in a public market, whereas the estimated fair value of our common stock at earlier dates represents a contemporaneous estimate of the fair value of illiquid shares that are restricted from public sale and for which no public market existed. The assumptions in the December 2013 valuation that changed in the determination of the initial offering price range include a decrease in the non-marketability discount to 0%.

In addition, the holders of our convertible preferred stock currently enjoy substantial economic rights and preferences over the holders of our common stock. In particular, holders of our outstanding preferred stock are entitled to receive dividends prior to any dividends declared or paid on any shares of our common stock. In addition, holders of outstanding preferred stock are entitled to receive liquidation payments in preference to holders of common stock. The assumed initial public offering price assumes the conversion of all of our convertible preferred stock upon the completion of the initial public offering. The corresponding elimination of the preferences and rights enjoyed by the holders of such preferred stock results in a higher valuation for

purposes of the assumed initial public offering price, compared to the December 31, 2013 valuation set by our board of directors, which included the effect of preferences for our preferred stock.

The assumed initial public offering price is based on a single outcome—a successful initial public offering in the near term which is not probability weighted. Accordingly, the assumed initial public offering price assumes that the probability of an initial public offering occurring in 2014 is 100%. By contrast, the estimated fair value of our common stock as of December 31, 2013 was determined based on the PWERM methodology, which is a probability-weighted approach that incorporates the potential for alternative liquidity events. Specifically, the December 2013 valuation assumed the probability of an initial public offering occurring in 2014 or 2015 was 60%.

We believe the current market conditions reflect a recent and significant increase in investor interest in diagnostics and medical device companies with a commercial product available, which has resulted in higher pre-money valuations for such companies than observed over the past several years. Since the fair value of a security depends on current market conditions, including the degree of investor interest and their required rate of return for investments, the increase in the fair value of our common stock reflects the changes in the current market.

Warrant Liability

We classify our preferred stock warrants as liabilities and account for them at fair value, with changes in fair value recognized in earnings. We determined the fair value of the warrants on the date of the issuance and in subsequent remeasurement by allocating our equity value, using the Black-Scholes option-pricing model, at each reporting date. Our equity value was allocated among the various convertible debt and equity classes expected to be outstanding at the liquidity events based on the rights and preferences of each class. We use a number of assumptions to estimate the fair value including the remaining expected life of the warrant, risk-free interest rates, expected dividend yield and expected volatility of the price of the underlying stock. These assumptions are subjective and the fair value of these warrants may have differed significantly had we used different assumptions.

Emerging Growth Company Status

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Results of Operations

Comparison of the Years Ended December 31, 2012 and 2013

Revenue

	Year Ended December 31,		Change	
	2012	2013	Amount	Percentage
	(dollars in thousands)			
Revenue	$ 2,475	$ 7,966	$ 5,491	222%

The increase in revenue was driven by an increase in test volume, which was primarily attributable to the increase in our sales force from 20 to 34 representatives in 2013 and the full-year impact of the increase in our sales force from 10 to 20 in the fourth quarter of 2012, and an increase in average revenue per test.

Test volume for the year ended December 31, 2012 was 9,990 compared to 22,371 for the year ended December 31, 2013.

The average revenue per test increased from $248 for the year ended December 31, 2012 to $356 for the year ended December 31, 2013. The increase in average revenue per test was primarily attributable to higher percentages of tests resulted for (1) Medicare Fee-for-Service patients and (2) Medicare Advantage patients where we had a contractual arrangement with their insurer.

Revenue related to Medicare Fee-for-Service patients represented 74% of revenue for the year ended December 31, 2012 compared to 76% of revenue for the year ended December 31, 2013. There were no other payers comprising more than 10% of revenue for the years ended December 31, 2012 and 2013, respectively.

Cost of Revenue

	Year Ended December 31,		Change	
	2012	2013	Amount	Percentage
	(dollars in thousands)			
Personnel expenses	$ 1,656	$ 1,909	$ 253	15%
Stock-based compensation	7	29	22	314%
Other sample processing costs	2,827	4,921	2,094	74%
Total sample processing costs	4,490	6,859	2,369	53%
Royalties	190	461	271	143%

Total cost of revenue	$ 4,680	$ 7,320	$ 2,640	56%

The increase in total sample processing costs was primarily attributable to higher test volume, which increased 124% from 9,990 for the year ended December 31, 2012 to 22,371 for the year ended December 31, 2013. The increase in total sample processing costs primarily consisted of a $2.1 million increase in other sample processing costs and a $275,000 increase in salaries and benefits. The $2.1 million increase in other sample processing costs was due to a $1.4 million increase in sample collection container and related shipping costs related to actual and anticipated test volume growth and a $674,000 increase in consumption of supplies used to process samples, partially offset by a decrease in depreciation and lower consulting expenses. The $275,000 increase in salaries and benefits, included in personnel expenses and stock-based compensation, was due to an increase in the number of employees associated with sample processing. Royalties increased by $271,000 from $190,000 for the year ended December 31, 2012 to $461,000 for the year ended December 31, 2013 due to higher cash collections.

The average cost of revenue per test decreased by $141 from $468 for the year ended December 31, 2012 to $327 for the year ended December 31, 2013, respectively. The decrease in average cost of revenue per test was primarily attributable to the increase in test volume. The decrease was partially offset by an increase in royalties due to higher cash collections.

We expect our cost of revenue to increase in future periods to the extent we process more tests and incur increased royalties as a result of higher cash collections. However, we expect the cost to process each sample to decrease as test volume increases due to operational efficiencies.

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Research and Development Expenses

	Year Ended December 31,		Change	
	2012	2013	Amount	Percentage
	(dollars in thousands)			
Personnel expenses	$ 5,488	$ 6,749	$ 1,261	23%
Stock-based compensation	144	385	241	167%
Clinical trial and lab expenses	1,270	1,843	573	45%
Professional fees	431	260	(171)	(40)%
Other research and development expenses	979	1,397	418	43%
Total research and development expenses	$ 8,312	$ 10,634	$ 2,322	28%

The increase in total research and development expenses was primarily attributable to a $1.5 million increase in salaries and benefits, included in personnel expenses and stock-based compensation, due to an increase in the number of research and development employees. The $573,000 increase in clinical trial and lab expenses primarily consisted of a $400,000 increase in the consumption of lab supplies and a $166,000 increase in expenses related to the PROMISE study, which began in the fourth quarter of 2012, and a $110,000 increase in clinical trial expenses for PRESET, which began in the fourth quarter of 2012, partially offset by a $225,000 decrease in IMPACT PCP clinical trial expenses, as the IMPACT PCP clinical trial was completed in 2012. The increase in other research and development expenses was primarily due to equipment maintenance costs. The increase in total research and development expenses was partially offset by a $171,000 reduction in professional fees, primarily due to lower consulting expenses.

We expect research and development expenses to increase in future periods as we increase investments in our product pipeline, increase the number of research and development employees, conduct additional studies to support our Corus CAD test and develop process improvements related to our Corus CAD test.

Sales and Marketing Expenses

	Year Ended December 31,		Change	
	2012	2013	Amount	Percentage
	(dollars in thousands)			
Personnel expenses	$ 5,101	$ 9,931	$ 4,830	95%
Stock-based compensation	121	417	296	245%
Professional fees	285	316	31	11%
Promotional and marketing	1,167	2,209	1,042	89%
Travel and entertainment	721	1,859	1,138	158%
Other sales and marketing expenses	594	922	328	55%
Total sales and marketing expenses	$ 7,989	$ 15,654	$ 7,665	96%

The increase in total sales and marketing expenses was primarily attributable to a $5.1 million increase in salaries and benefits, included in personnel expenses and stock-based compensation, due to an increase in our U.S. sales force from 10 in the fourth quarter of 2012 to 34 in the fourth quarter of 2013, and the addition of our first five regional sales managers beginning in the third quarter of 2012 through the third quarter of 2013. The combined $1.1 million increase in professional fees and promotional and marketing was primarily attributable to a $571,000 increase in promotional and marketing and related materials, a $190,000 increase in market research expenses, a $185,000 increase in public relations expenses and a $161,000 increase in marketing meeting and conference expenses. The $1.1 million increase in travel and

entertainment was due to the increase in sales personnel. The $328,000 increase in other sales and marketing expenses was primarily attributable to the increase in the number of sales and marketing employees, including a $130,000 increase in information system costs.

We expect sales and marketing expenses will continue to increase in future periods due to our efforts to establish adoption of and reimbursement for our Corus CAD test, including increases in our sales force and marketing efforts.

General and Administrative Expenses

	Year Ended December 31,		Change	
	2012	2013	Amount	Percentage
	(dollars in thousands)			
Personnel expenses	$ 3,383	$ 4,856	$ 1,473	44%
Stock-based compensation	194	765	571	294%
Professional fees	1,895	2,941	1,046	55%
Other general and administrative expenses	1,749	2,789	1,040	59%
Total general and administrative expenses	$ 7,221	$ 11,351	$ 4,130	57%

The increase in total general and administrative expenses was primarily attributable to a $2.0 million increase in salaries and benefits, included in personnel expenses and stock-based compensation, due to an increase in the number of general and administrative employees. The $1.0 million increase in professional fees was primarily attributable to a $453,000 increase in billing and collection fees due to higher test volume, a $195,000 increase in consulting fees, a $153,000 increase in legal fees and a $97,000 increase in recruiting expenses. The $1.0 million increase in other general and administrative expenses was primarily attributable to a $344,000 increase in information system costs due to the increase in number of employees, a $226,000 increase in facilities related costs primarily due to the lease of additional office space, and a $236,000 increase in travel, entertainment and other indirect employee expenses.

We expect general and administrative expenses to increase in future periods as we continue to grow, expand our operations and develop the infrastructure necessary to operate as a public company. These expenses will include the hiring of additional employees, higher billing and collections fees, increased audit and legal fees, costs of compliance with securities and other regulations, implementation costs for compliance with securities and other regulations, implementation costs for compliance with the provisions of the Sarbanes-Oxley Act, investor relations expense and higher insurance premiums.

Liquidity and Capital Resources

Since our inception, we have incurred losses and negative cash flow from our operations and, as of December 31, 2013, we had an accumulated deficit of $184.3 million. We have funded our operations to date from the sale of equity securities, notes payable, warrants to purchase equity securities and revenue from operations.

As of December 31, 2013, we had cash, cash equivalents and investments of $26.6 million. Our cash, cash equivalents and investments are held in a variety of interest-bearing instruments including money market funds, U.S. government agencies, municipal securities and corporate bonds.

Our recurring losses from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of, and for the year ended, December 31, 2013, describing the existence of substantial doubt about our ability to continue as a going concern. Such

substantial doubt does not give effect to the receipt of any proceeds from this offering. We will need to raise substantial additional funding in the near term in order to sustain operations.

The following table summarizes the primary sources and uses of cash for each of the periods presented:

	Year Ended December 31,	
	2012	2013
Net cash provided by (used in):		
Operating activities	$ (23,829)	$ (37,473)
Investing activities	(26,157)	28,714
Financing activities	57,705	40
Net increase (decrease) in cash and cash equivalents	$ 7,719	$ (8,719)

At December 31, 2013, our cash and cash equivalents were held for working capital purposes. We do not enter into investments for trading or speculative purposes. Our policy is to invest any cash in excess of our immediate requirements in investments designed to preserve the principal balance and provide liquidity. At December 31, 2013, we had restricted cash of $399,000, which consisted of certificates of deposit for security for a letter of credit related to our facilities lease and a corporate credit card.

Cash Flows for the Year Ended December 31, 2012 and 2013

Operating Activities

Net cash used in operating activities, which includes net loss adjusted for certain non-cash items and changes in operating assets and liabilities, was $37.5 million during the year ended December 31, 2013. Net cash used in operating activities for the period reflected a net loss of $36.9 million; net non-cash items of $3.2 million consisting primarily of depreciation and amortization of $1.7 million, stock-based compensation of $1.6 million, and remeasurement of the warrant liability of $27,000; and a net cash outflow from changes in operating assets and liabilities of $3.8 million. The significant items comprising the changes in operating assets and liabilities were a $2.4 million increase in accounts receivables and prepaid expenses and other current assets and a $3.7 million increase in other non-current assets, partially offset by a $2.3 million increase in accounts payable, accrued payroll liabilities and accrued and other liabilities. The increase in accounts receivable was driven by an increase in test volume. The increases in other non-current assets and accrued and other liabilities were due to the costs related to preparing for our initial public offering. The increase in accrued payroll liabilities was primarily attributable to the higher accrued sales commissions due to an increase in our sales force from the fourth quarter of 2012 to the fourth quarter of 2013.

Net cash used in operating activities was $23.8 million the year ended December 31, 2012 and reflected a net loss of $25.6 million, net non-cash items of $1.7 million, consisting primarily of depreciation and amortization of $1.2 million and stock-based compensation of $466,000, and a net cash inflow from changes in operating assets and liabilities of $136,000. The significant items comprising the changes in operating assets and liabilities were a $1.6 million increase in accrued payroll liabilities due to higher bonus accruals, partially offset by $944,000 increase in accounts receivables, prepaid expenses and other current assets and other non-current assets, and a $474,000 decrease in accrued and other liabilities.

Investing Activities

Our investing activities have consisted primarily of purchases, maturities and sales of investments and capital expenditures. Net cash provided by investing activities was $28.7 million during the year ended December 31, 2013, which consisted of $30.0 million in net proceeds from investments offset by $1.3 million in capital expenditures.

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Net cash used in investing activities was $26.2 million for the year ended December 31, 2012, which consisted of $25.2 million in net purchases of investments and $1.0 million in capital expenditures.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2013 was $40,000 and was related to proceeds from issuance of common stock resulting from stock option exercises.

Net cash provided by financing activities for the year ended December 31, 2012 was $57.7 million and was primarily from the issuance of Series CC preferred stock.

Funding Requirements and Plan of Operations

Since inception, we have incurred losses and negative cash flow from operations and, as of December 31, 2013, we had an accumulated deficit of $184.3 million. We expect to continue to incur losses from operations for the next several years. We expect that our cost of revenue, research and development, sales and marketing and general and administrative expenses will increase in future periods and, as a result, we will need additional capital to fund our operations. Due to the expected losses from operations, we believe that our capital resources as of December 31, 2013 are insufficient to fund operations through December 31, 2014.

Until we can generate a sufficient amount of revenue, if ever, we expect to finance future cash needs through public or private equity or debt offerings. Additional capital may not be available on reasonable terms, if at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly scale back our operations or delay, scale back or discontinue the development of one or more of our services, or enter into a collaboration or similar arrangement with respect to our Corus CAD test. If we raise additional funds through the issuance of additional debt or equity securities, it could result in dilution to our existing stockholders, increased fixed payment obligations and these securities may have rights senior to those of our common stock. If we incur indebtedness, we could become subject to covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Any of these events could significantly harm our business, financial condition and prospects.

Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risk and uncertainties, and actual results could vary as a result of a number of factors. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect.

Contractual Obligations

The following table summarizes our significant contractual obligations as of December 31, 2013 and the effect those obligations are expected to have on our liquidity and cash flows in future periods:

	Payments Due by Period				
	Total	Less Than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
	(dollars in thousands)				
Collaboration obligations	$ 720	$ 520	$ 200	—	—
Operating lease obligations	14,809	1,042	3,320	3,857	6,590
Total contractual obligations	$ 15,529	$ 1,562	$ 3,520	$ 3,857	$ 6,590

Our non-cancelable operating lease obligations are for corporate office and laboratory space. We lease two facilities in Palo Alto, California totaling 42,000 square feet. Each lease expires in July 2014. We have the right to extend the lease for the facility containing our laboratory space for two years based on market rates. On October 10, 2013, we entered into a lease agreement for approximately 70,000 square feet of laboratory and office space in Redwood City, California, including space that will serve as a replacement for our corporate headquarters and our existing laboratory facilities. We do not plan to renew or extend our current leases for laboratory and office space in Palo Alto, California.

In September 2012, we entered into a settlement agreement with a university, or the University, to settle a payment dispute related to terminated license and option agreements between us and the University entered into in 2004 and 2006 and terminated in 2009. Under the terms of the settlement agreement, we agreed to pay the University a total of $425,000 in quarterly installment payments of $25,000 starting in the fourth quarter of 2012 and ending in the fourth quarter of 2016. Prior to 2012, we recognized expense for the estimated settlement. No additional expense was recognized in 2012 or 2013.

Effective in April 2006 and October 2007, we entered into collaboration and license agreements with a third party related to research, development and commercialization of molecular diagnostic tests in the field of cardiovascular disease. Under the terms of the agreement entered into in October 2007, or the Agreement, we were required to pay an ongoing annual contract maintenance fee until the earlier of (1) termination of the Agreement or (2) the end of the term of the study in which certain of the third party's samples were to be used. We terminated the Agreement effective August 2011. In connection with the Agreement, we recognized $75,000 of expense for the year ended December 31, 2011 and no expense for the years ended December 31, 2012 and December 31, 2013, respectively.

We also have committed to make potential future payments to a third party as part of a collaboration agreement. Payments under this agreement generally become due and payable only upon achievement of specific project milestones. To the extent the achievement of these milestones is probable or reasonably estimable, such commitments have been included in the table above. The aggregate amount of all potential future payments is not material.

Off-Balance Sheet Arrangements

As of December 31, 2012 and December 31, 2013, we did not have any off-balance sheet arrangements.

Quantitative and Qualitative Disclosures about Market Risk

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. We are exposed to market risk related to changes in interest rates. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of December 31, 2013 we had cash, cash equivalents, and investments of $26.6 million. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

Recently Issued Accounting Pronouncements

There were no new accounting pronouncements issued that are expected to significantly impact our financial statements or results of operations.